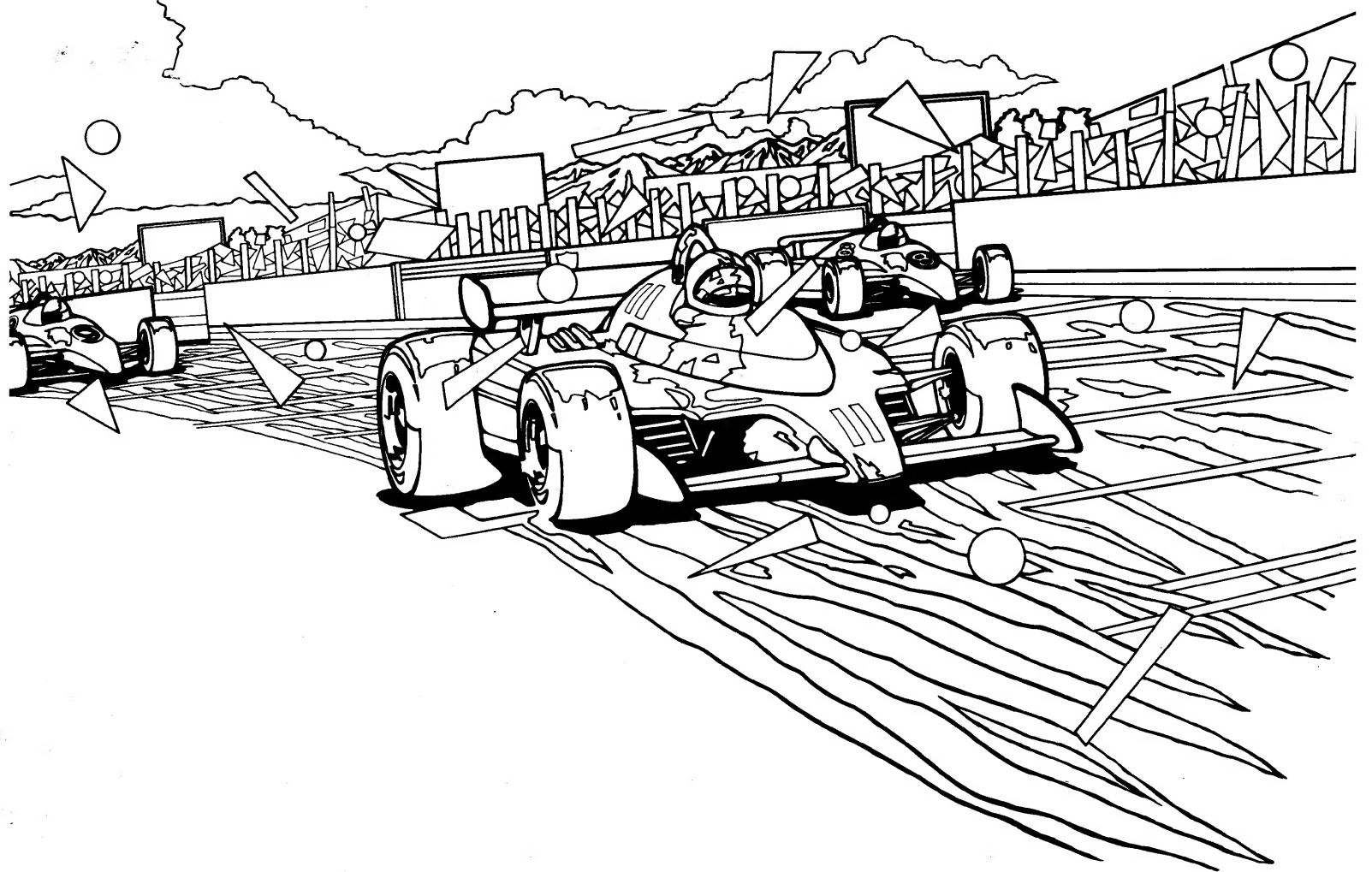


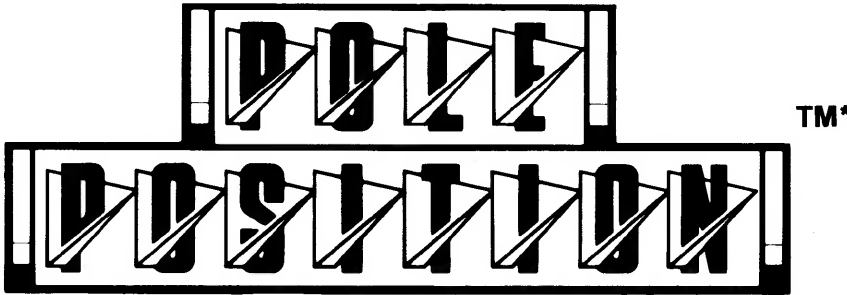
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NOTE  
This staple temporarily holds the schematic package together. Remove the staple before using these schematics.



## Schematic Package Supplement to

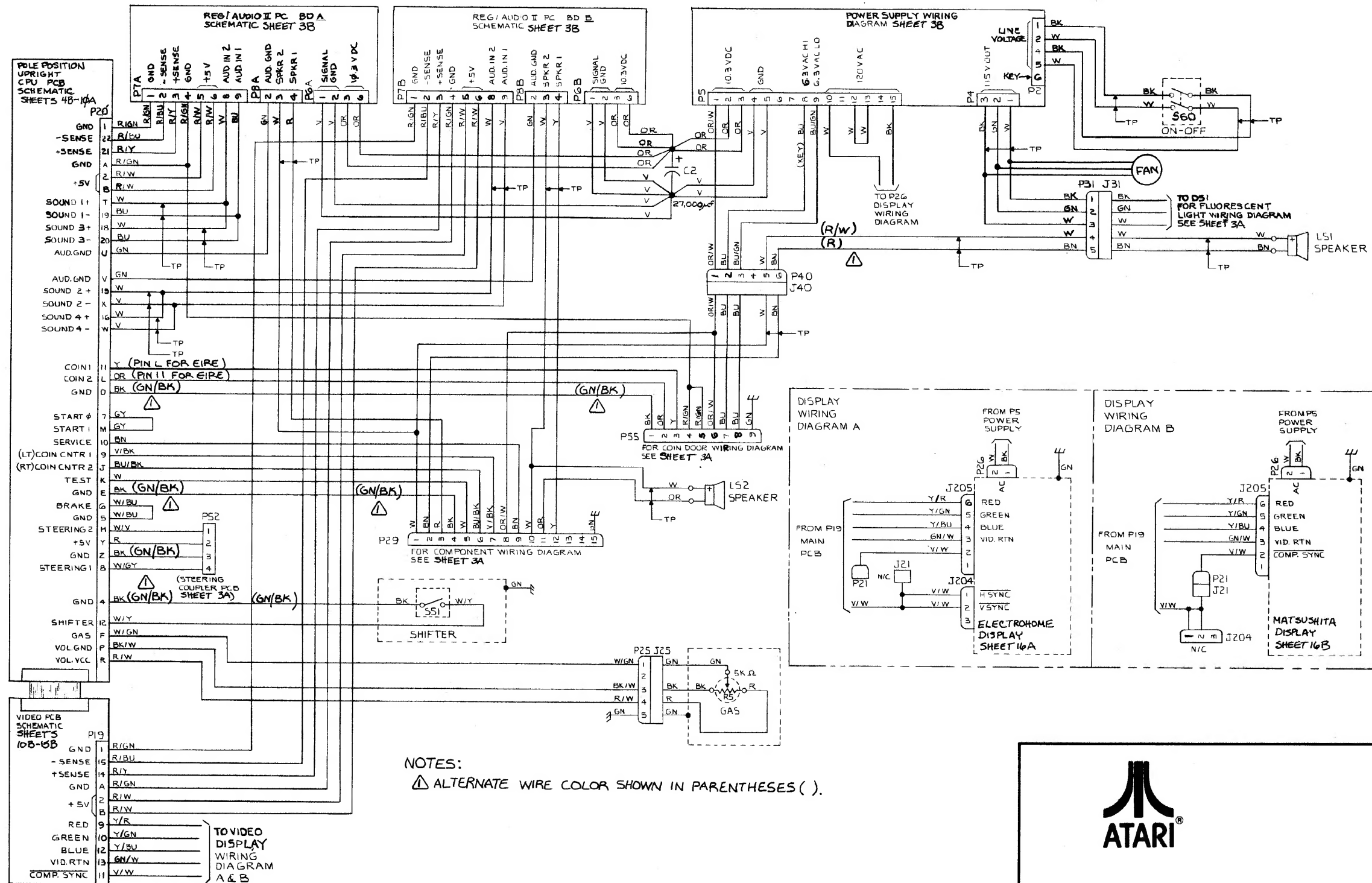


## Operation, Maintenance, and Service Manual

\*Pole Position is engineered and designed by Namco Ltd. Manufactured under license by Atari, Inc.

2M

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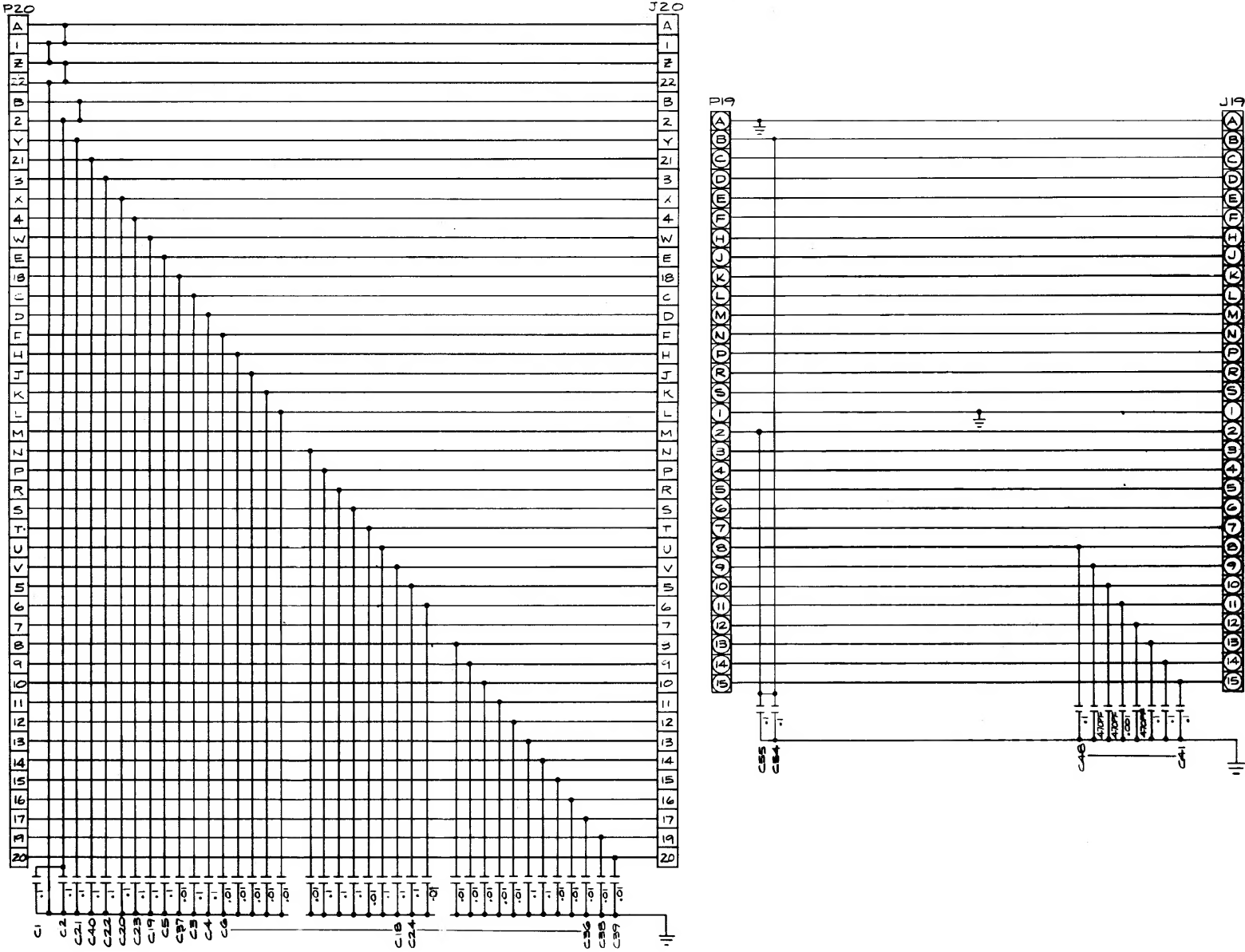
# Pole Position Upright Main Wiring Diagram

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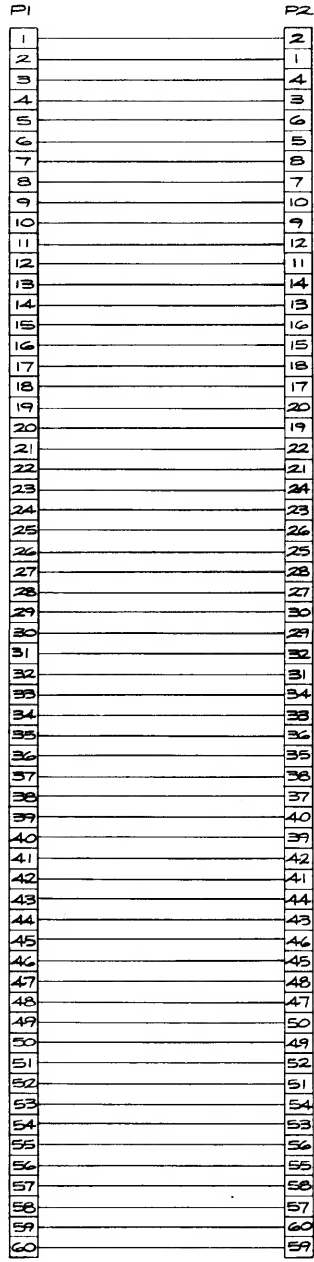
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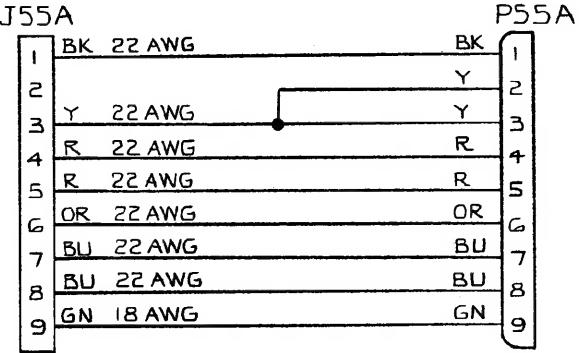
EMI Shield PCB Wiring Diagram



EMI End PCB Wiring Diagram



Coin Option Interconnect Wiring Diagram

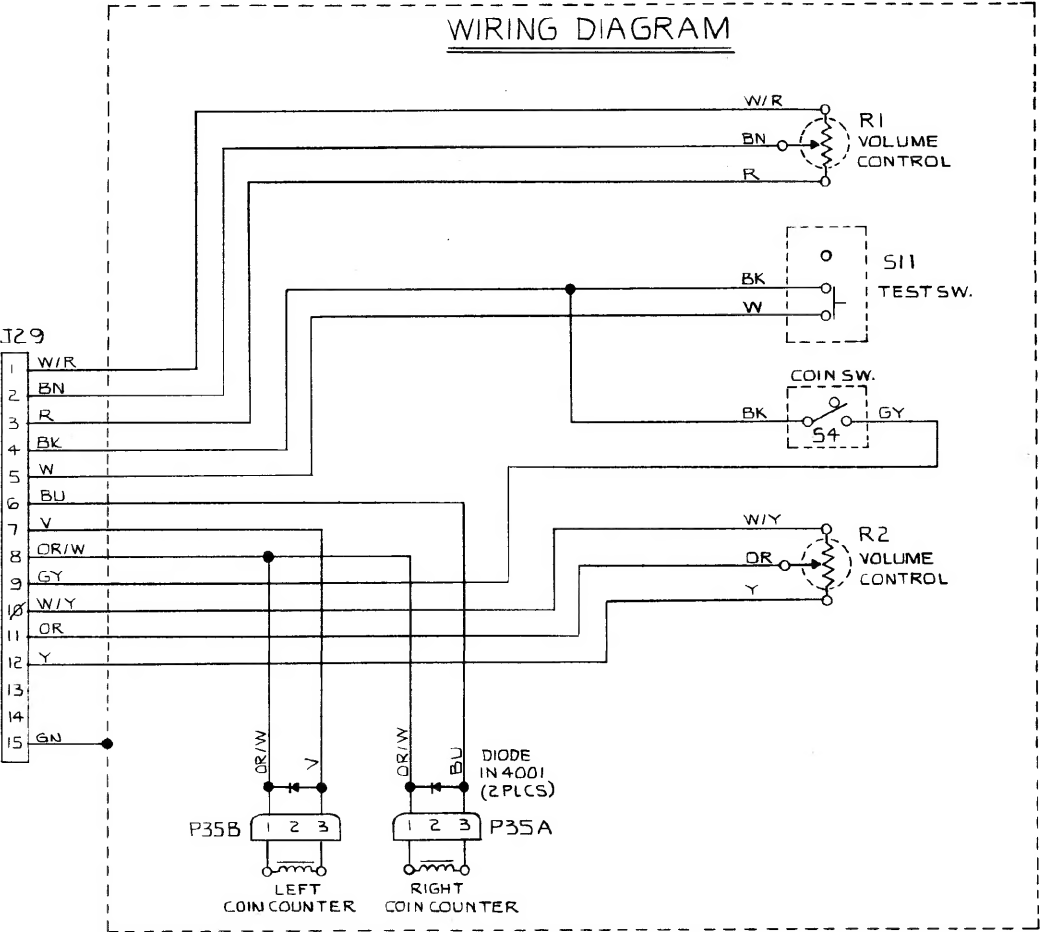


Pole Position Game Wiring Interfaces

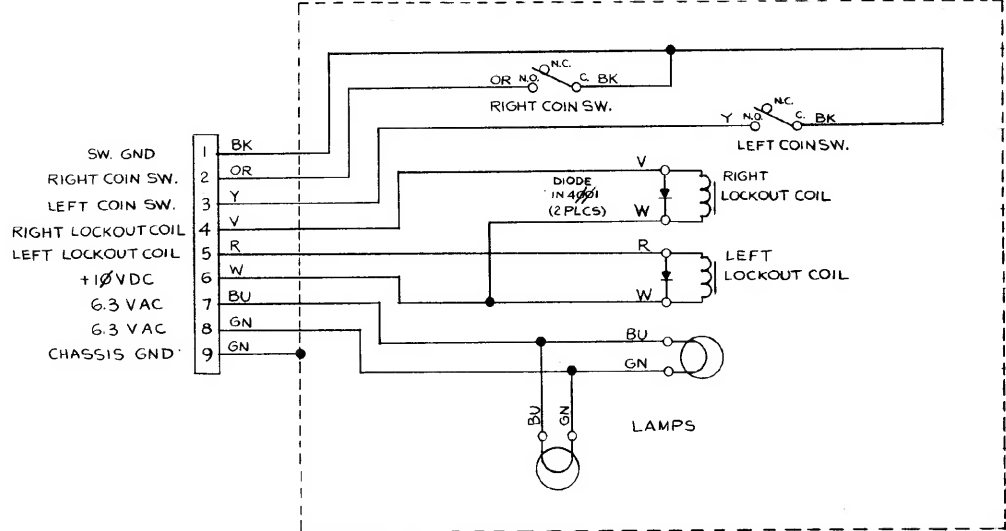
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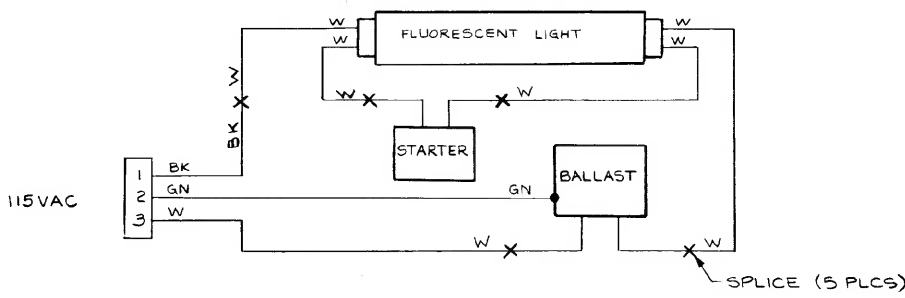
Upright Utility-Panel Wiring Diagram



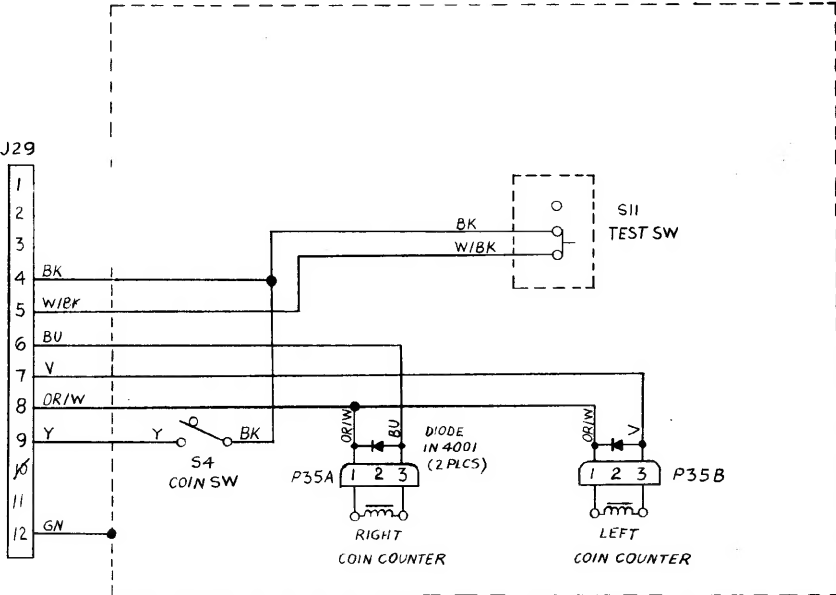
Coin-Door Wiring Diagram



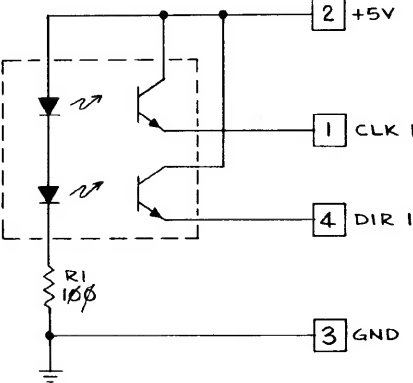
Upright-Only Fluorescent Light Wiring Diagram



Sit-Down Utility-Panel Wiring Diagram



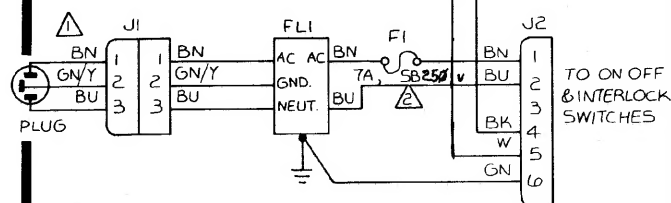
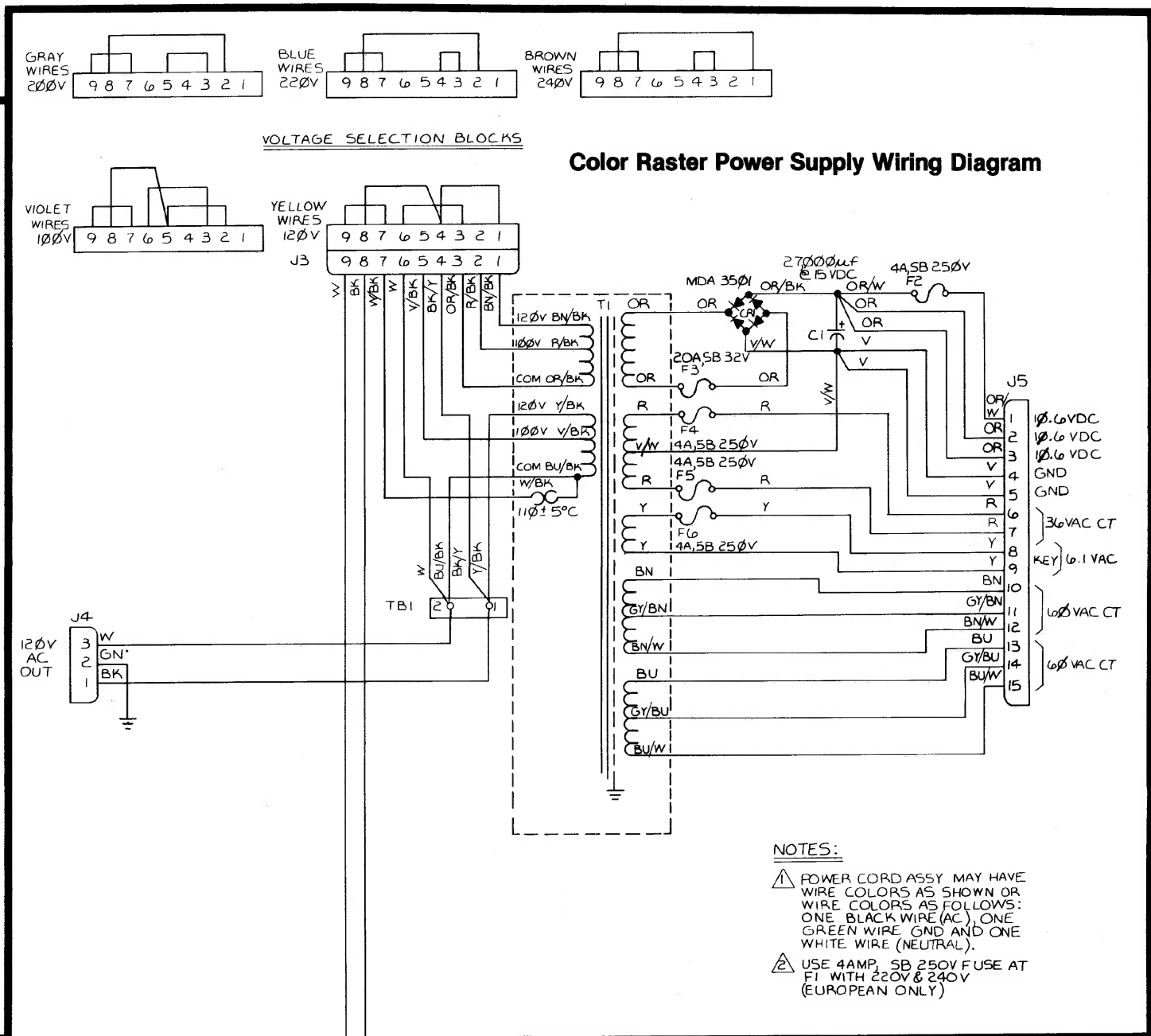
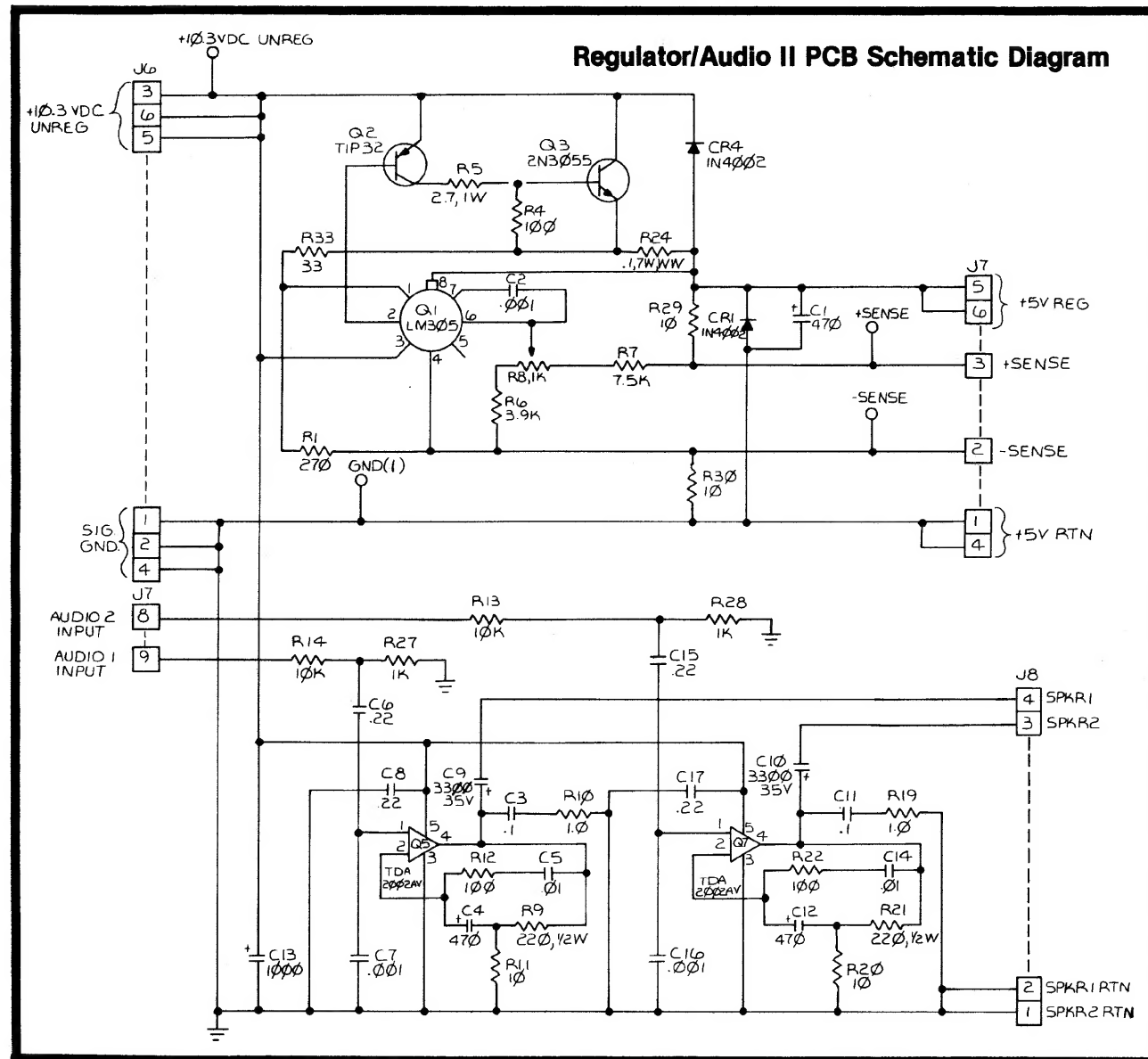
Steering Coupler PCB Schematic



Pole Position Game Wiring Interfaces

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### Pole Position Reg./Audio II PCB and Power Supply Diagrams

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MEMORY MAP

CPU 1 AND 2

| HEXADECIMAL ADDRESS                     | READ/ WRITE | FUNCTION                                                                                                        |
|-----------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------|
| 0000-37FFF                              | R           | Program Memory                                                                                                  |
| 4000-7FFF                               | R           | Program Memory                                                                                                  |
| 8000-8FFF<br>(8700-87FF)<br>(8F00-8FFF) | R/W         | Motion Object Memory<br>Vertical and Horizontal Position<br>Character, Color, Vertical Size,<br>Horizontal Size |
| 9000-97FF<br>(9000-93FF)<br>(9700-97FF) | R/W         | Road Memory<br>Character<br>Horizontal Scroll                                                                   |
| 9800-9FFF<br>A000-AFFF)                 | R/W<br>R/W  | Alphanumeric Memory<br>View Character Memory                                                                    |
| C000                                    | W           | View Horizontal Position                                                                                        |
| C100                                    | W           | Road Vertical Position                                                                                          |

CPU 3

| HEXADECIMAL ADDRESS                     | READ/ WRITE | FUNCTION                                                                                                                  |
|-----------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------|
| 0000-1FFF                               | R           | Program Memory                                                                                                            |
| 2000-2FFF                               | R           | Program Memory                                                                                                            |
| 3000-37FF                               | R/W         | Battery Back-Up RAM                                                                                                       |
| 4000-43FF<br>(4380-43FF)                | R/W         | Motion Object Memory<br>Vertical and Horizontal Position                                                                  |
| 4400-47FF<br>(4780-47FF)                | R/W         | Motion Object Memory<br>Character, Color, Vertical Size,<br>Horizontal Size                                               |
| 4800-48FF<br>(4800-49FF)<br>(4B80-4BFF) | R/W         | Road Memory<br>Character<br>Horizontal Scroll                                                                             |
| 4C00-57FF<br>(4C00-4FFF)<br>(5000-53FF) | R/W         | Alphanumeric Memory<br>Alphanumeric<br>View Character                                                                     |
| 8000-83FF<br>(83C0-83FF)                | R/W         | Sound Memory<br>Sound                                                                                                     |
| 9000                                    | R/W         | 4-Bit CPU Controller                                                                                                      |
| A000                                    | R/W         | Input/Output                                                                                                              |
| A000                                    | W<br>R      | IRQ Enable (1 = enable, 0 = disable)<br>Bit 0: Not Used<br>Bit 1: 128 V<br>Bit 2: Power-Line Sense<br>Bit 3: ADC End Flag |
| A001                                    | W           | 4-Bit CPU Enable                                                                                                          |
| A002                                    | W           | Sound Enable                                                                                                              |
| A003                                    | W           | ADC Input Select                                                                                                          |
| A004                                    | W           | CPU 1 Enable                                                                                                              |
| A005                                    | W           | CPU 2 Enable                                                                                                              |
| A006                                    | W           | Start Switch                                                                                                              |
| S007                                    | W           | Color Enable                                                                                                              |
| A100                                    | W           | Watchdog Reset                                                                                                            |
| A200                                    | W           | Car Sound (Lower Nybble)                                                                                                  |
| A300                                    | W           | Car Sound (Upper Nybble)                                                                                                  |

Schematic Reference Designators and Symbols

Logic symbols depict the logic function performed by that particular device and may differ from the manufacturer's data.

REFERENCE DESIGNATORS:

|    |                                            |
|----|--------------------------------------------|
| C  | Capacitor                                  |
| CR | Diode, signal or rectifier                 |
| F  | Fuse                                       |
| J  | Connector                                  |
| L  | Inductor, fixed or variable                |
| LS | Speaker                                    |
| P  | Connector                                  |
| Q  | Transistor or silicon-controlled rectifier |
| R  | Resistor, fixed or variable                |
| S  | Switch                                     |
| T  | Transformer                                |
| TP | Twisted wire pair                          |
| VR | Voltage regulator                          |
| Y  | Crystal                                    |

WIRE COLORS:

|    |        |
|----|--------|
| R  | Red    |
| GN | Green  |
| Y  | Yellow |
| W  | White  |
| BU | Blue   |
| BN | Brown  |
| BK | Black  |
| OR | Orange |
| V  | Violet |
| GY | Gray   |

Electrical components shown on the schematic diagrams are in the following units unless otherwise noted:

Capacitors = microfarads ( $\mu f$ )  
Resistors = ohms ( $\Omega$ )  
Inductors = microhenrys ( $\mu h$ )

SYMBOLS:

|                                                                                       |        |                                                                                       |            |                                                                                       |                        |
|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------|------------------------|
|  | Ground |  | Test Point |  | PCB edge connector pad |
|---------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------|------------------------|

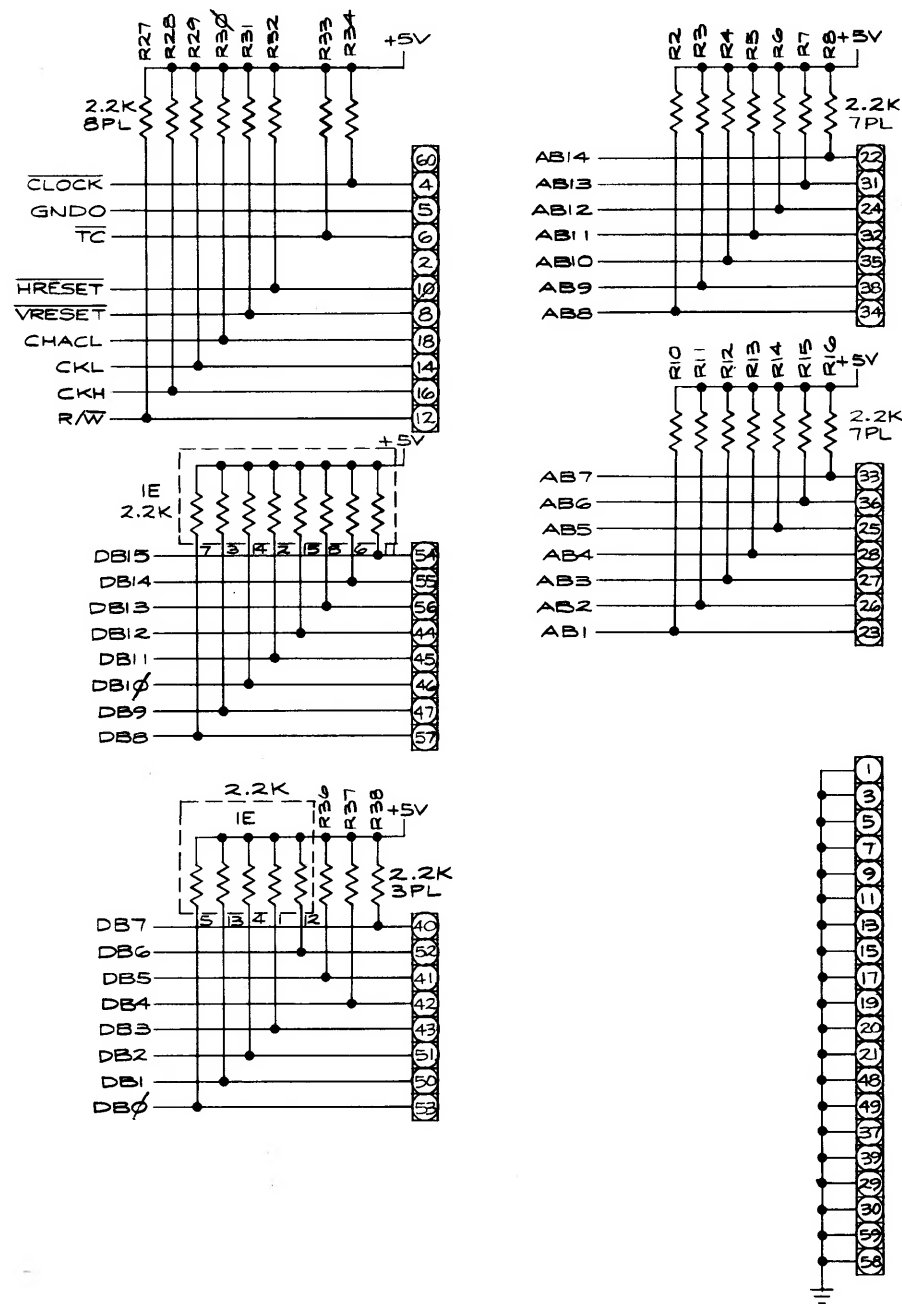


Pole Position Memory Map and Schematic Notes

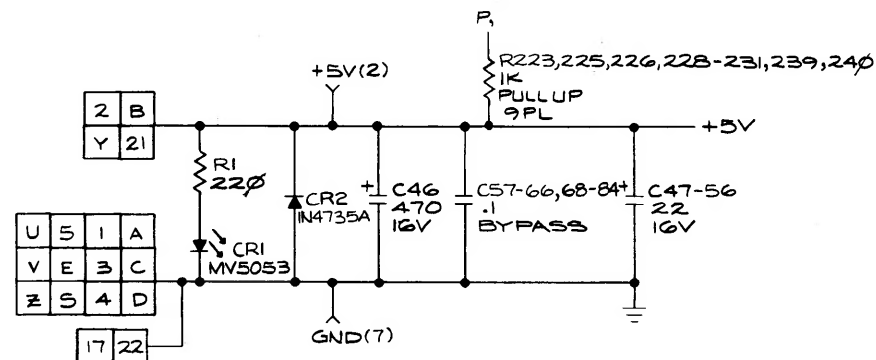
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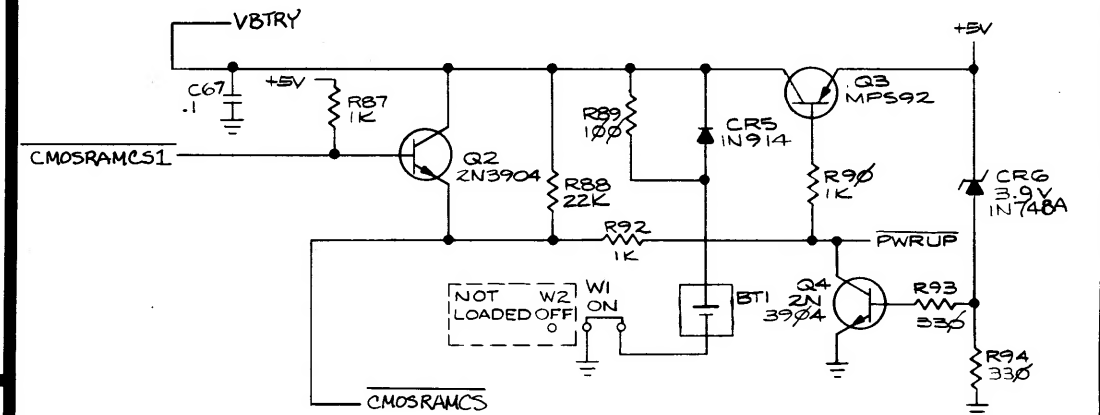
### CPU PCB Edge Connector



### CPU PCB Power Input



### RAM Battery Back-Up Power



### Pole Position CPU PCB Schematic Diagram

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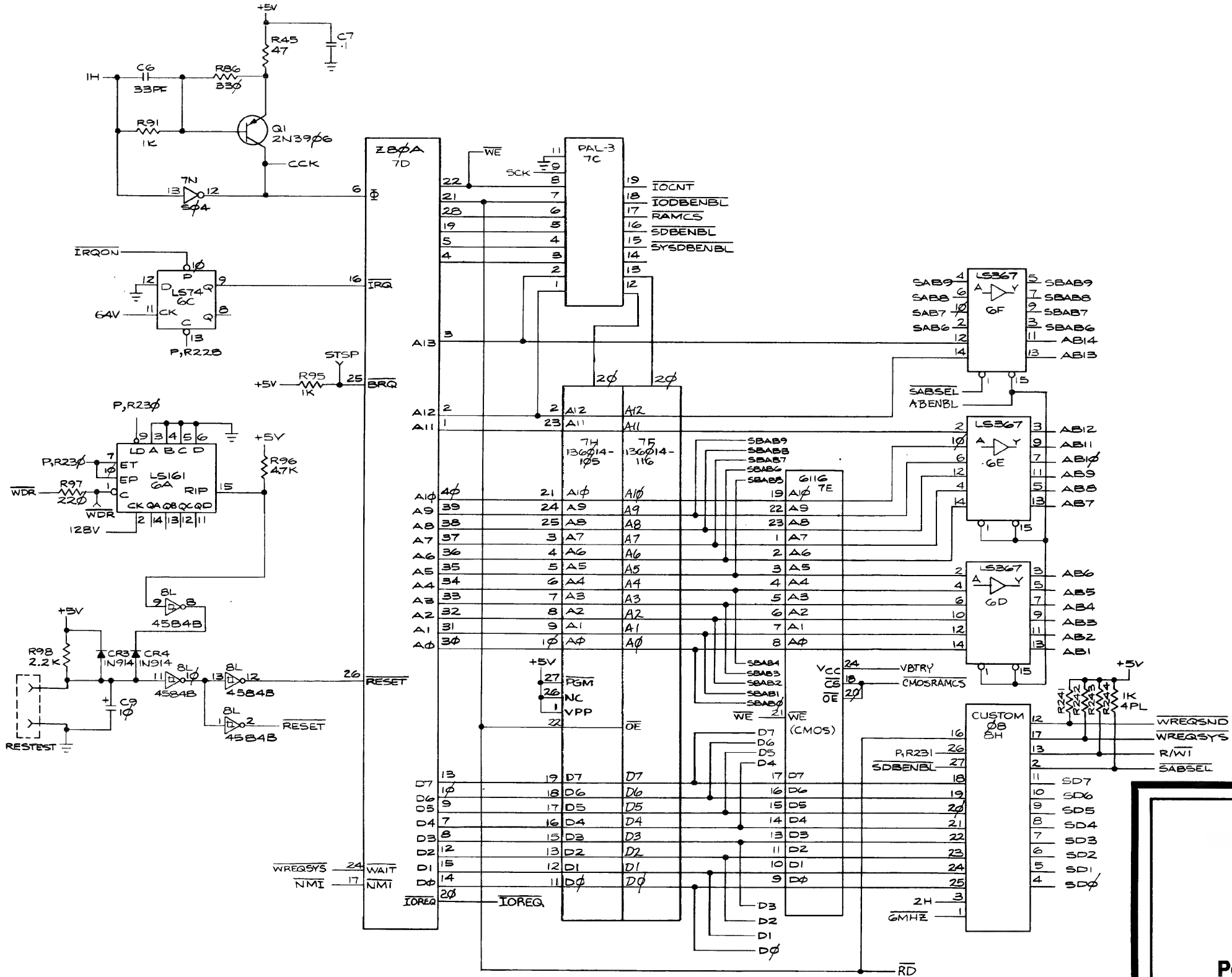




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**8th printing**



## Sound Microprocessor

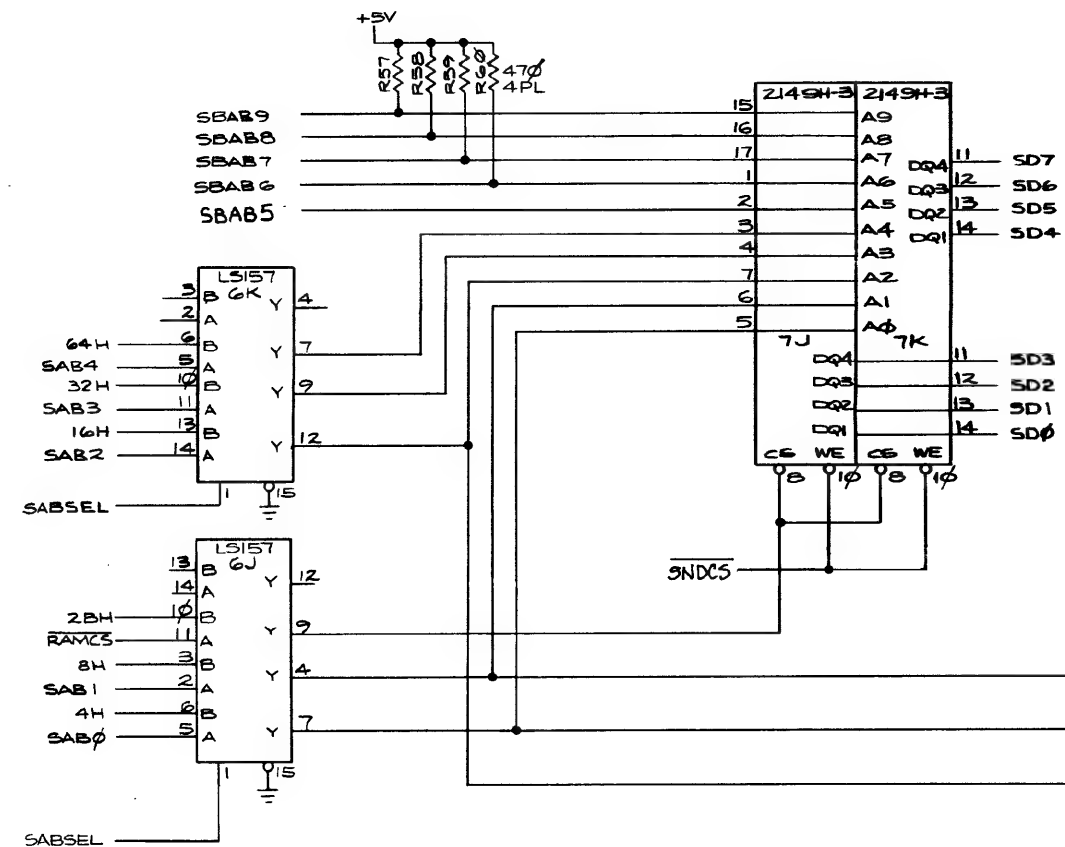


## Pole Position CPU PCB Schematic Diagram

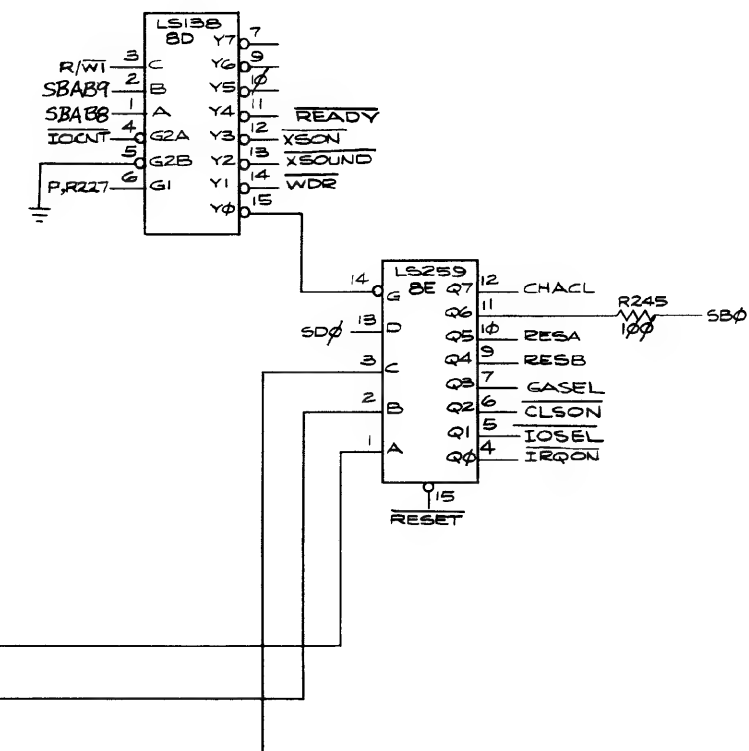
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### Sound Memory



### Sound and I/O Address Decoders



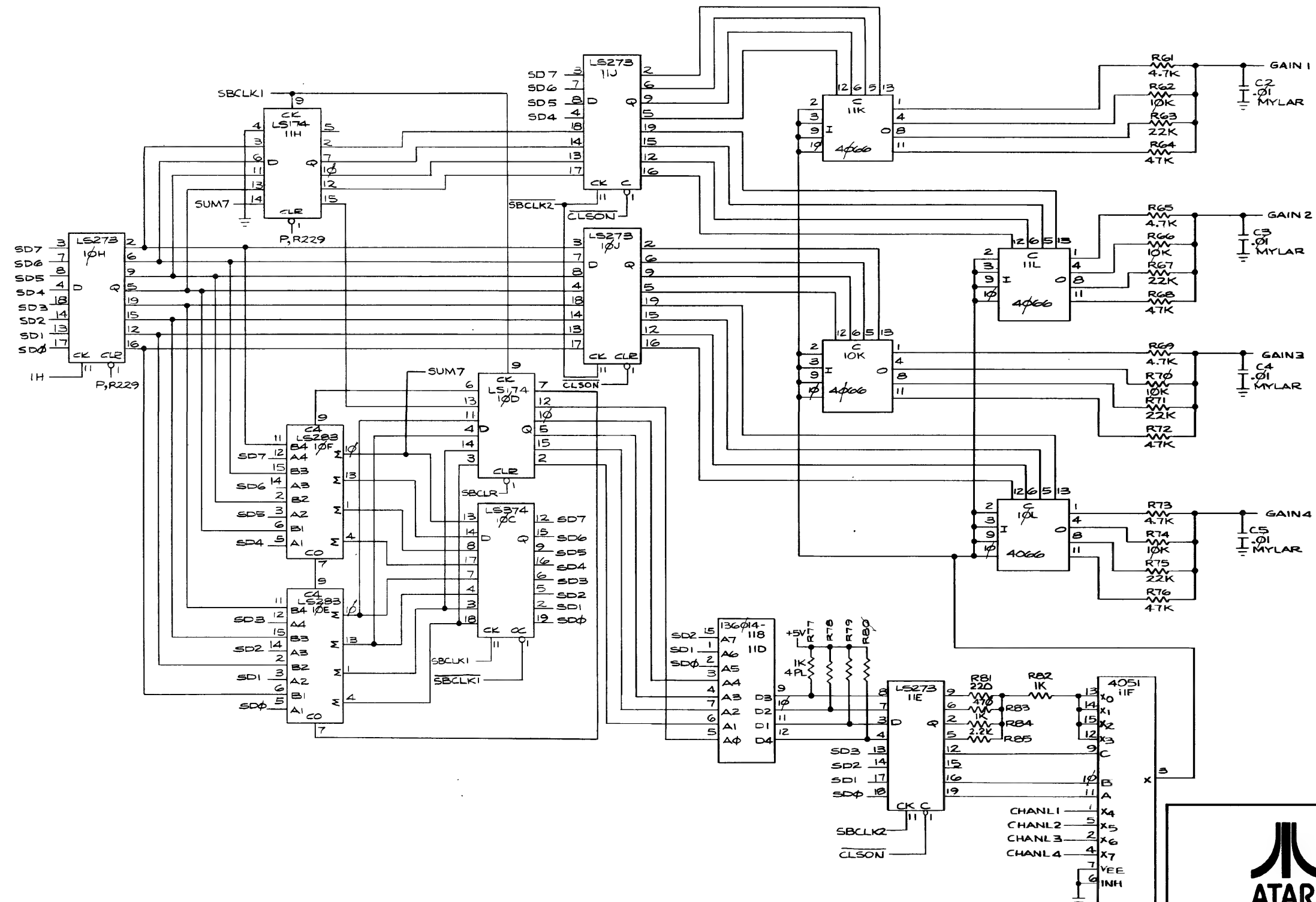
### Pole Position CPU PCB Schematic Diagram

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# Sound Buffers and Multiplexer

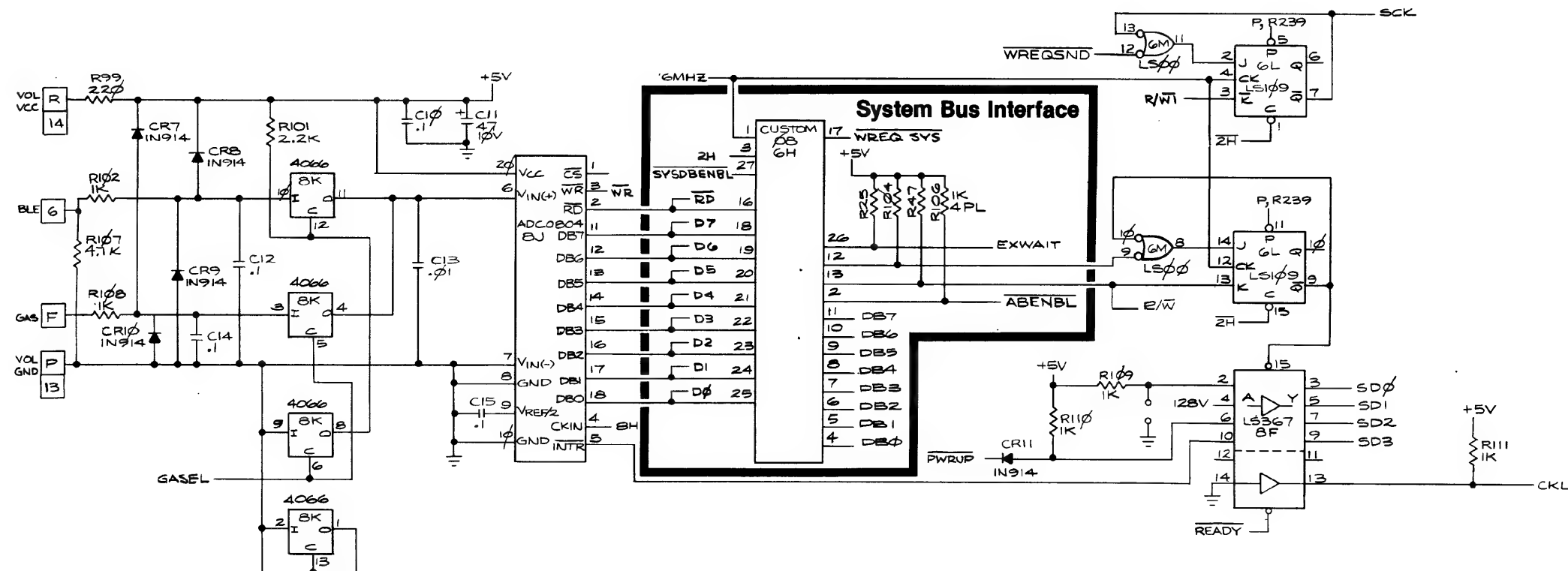


## Pole Position CPU PCB Schematic Diagram

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# Brake and Gas Pedal Input

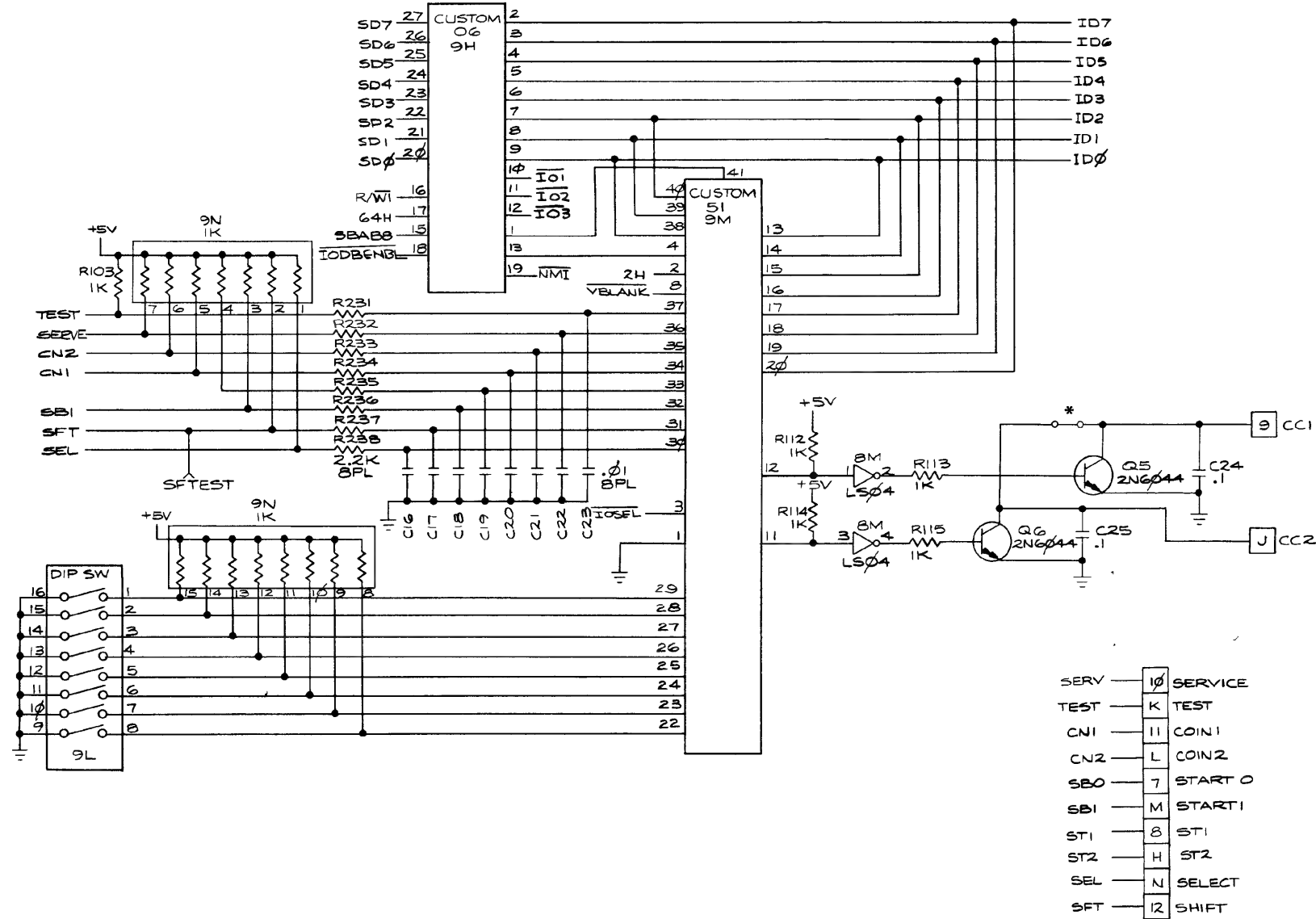


## Pole Position CPU PCB Schematic Diagram

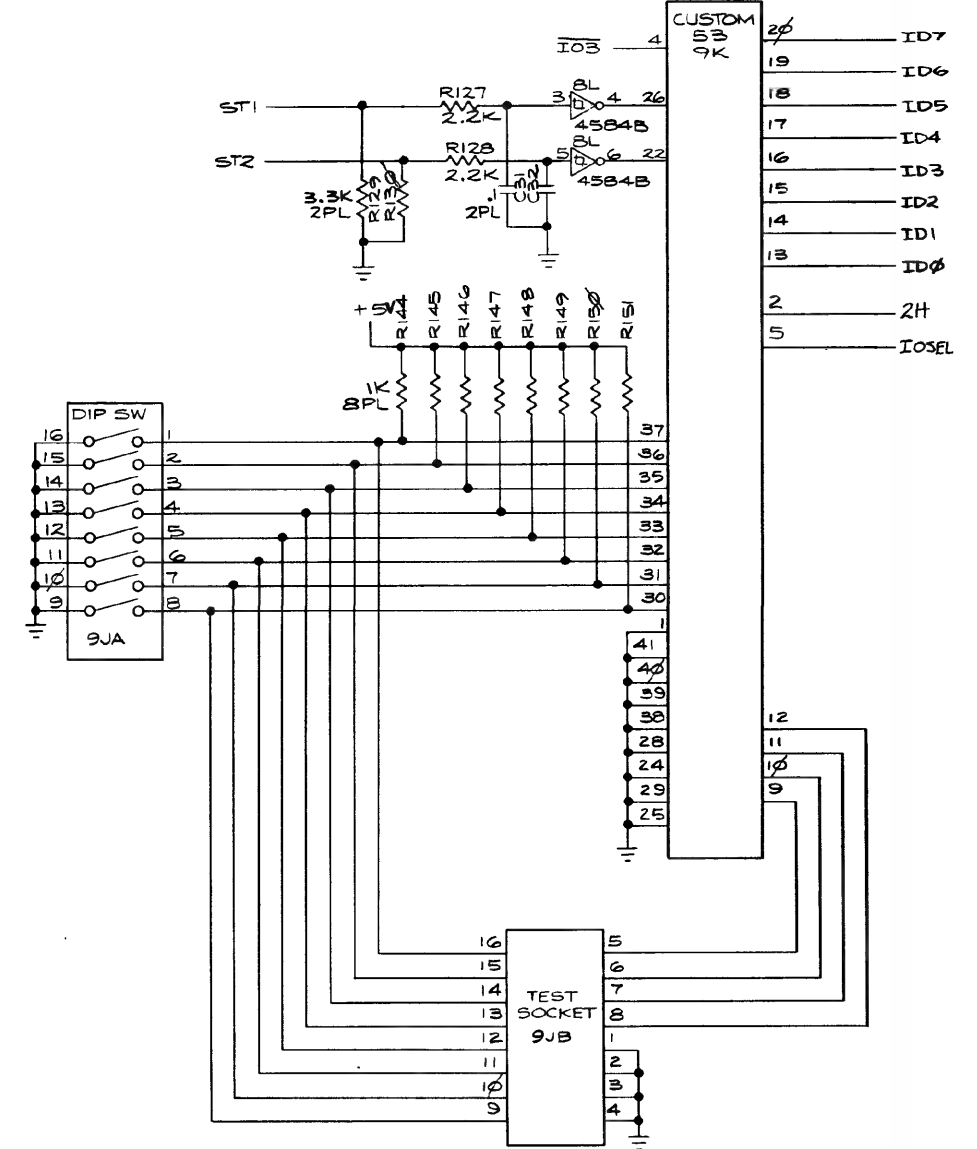
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### Option Switch Input and I/O Interface



\* PAD MUST BE SPLIT ON IRISH-BUILT CABINETS



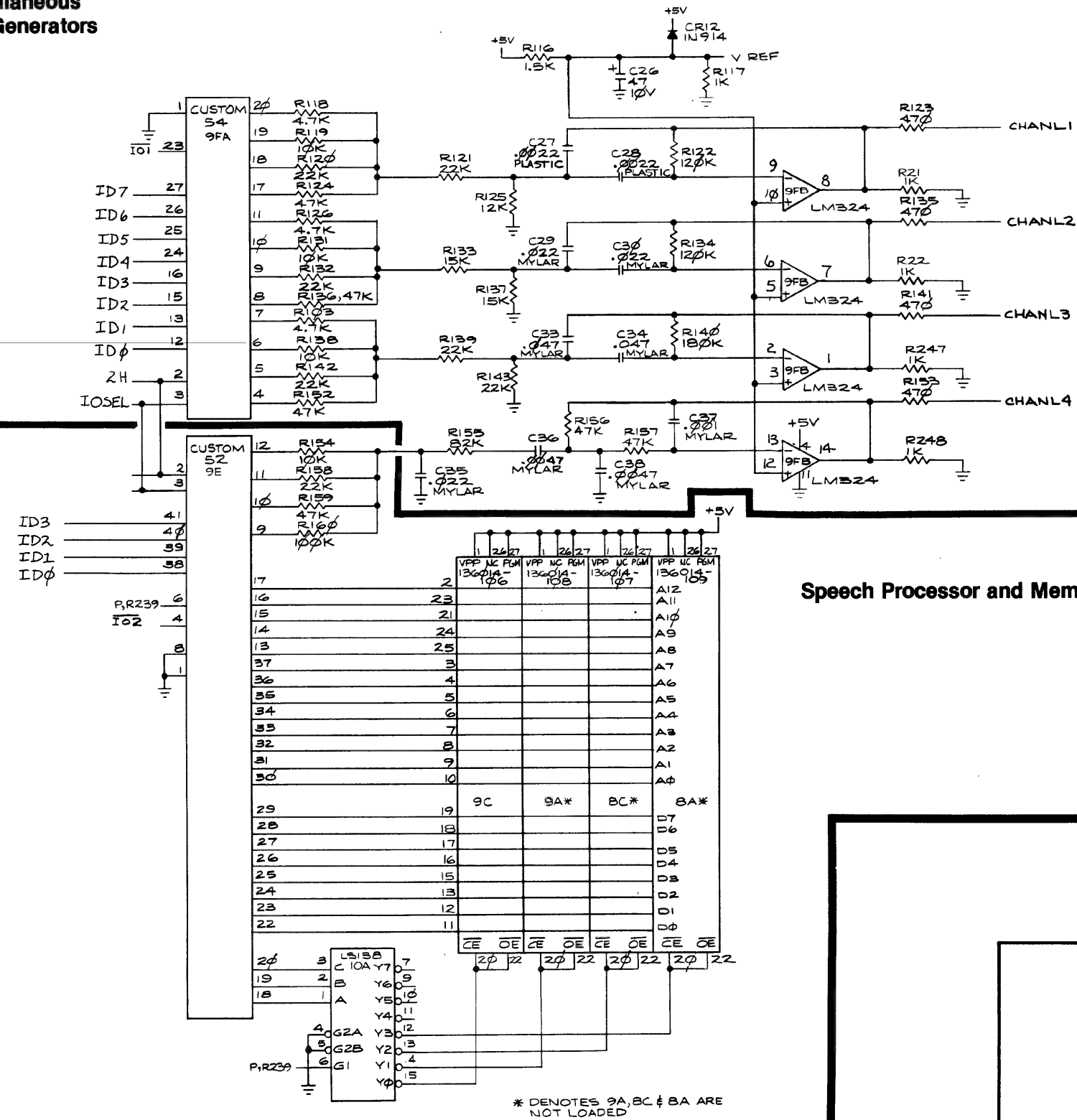
### Pole Position CPU PCB Schematic Diagram

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# Miscellaneous Sound Generators

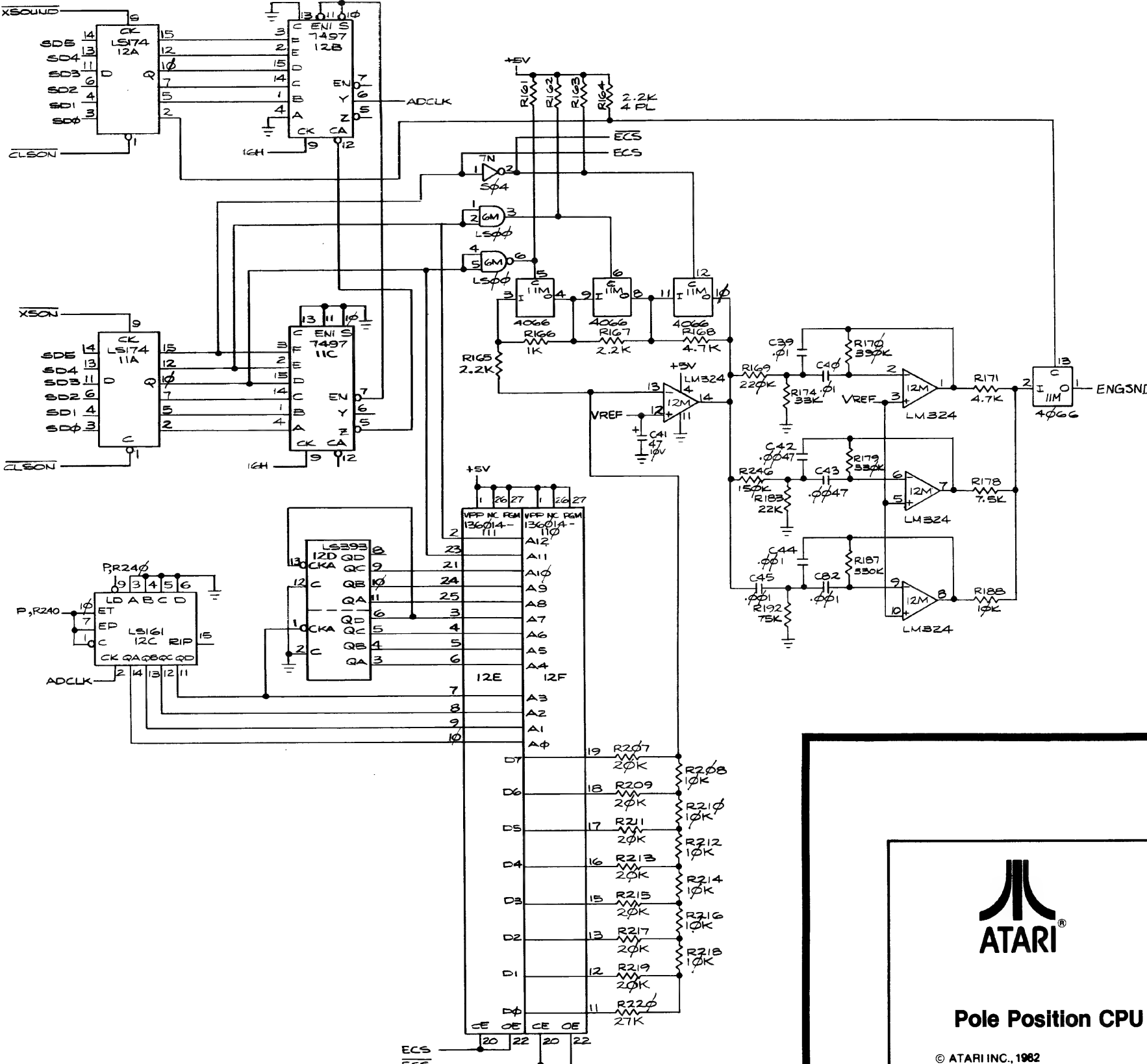


## Pole Position CPU PCB Schematic Diagram

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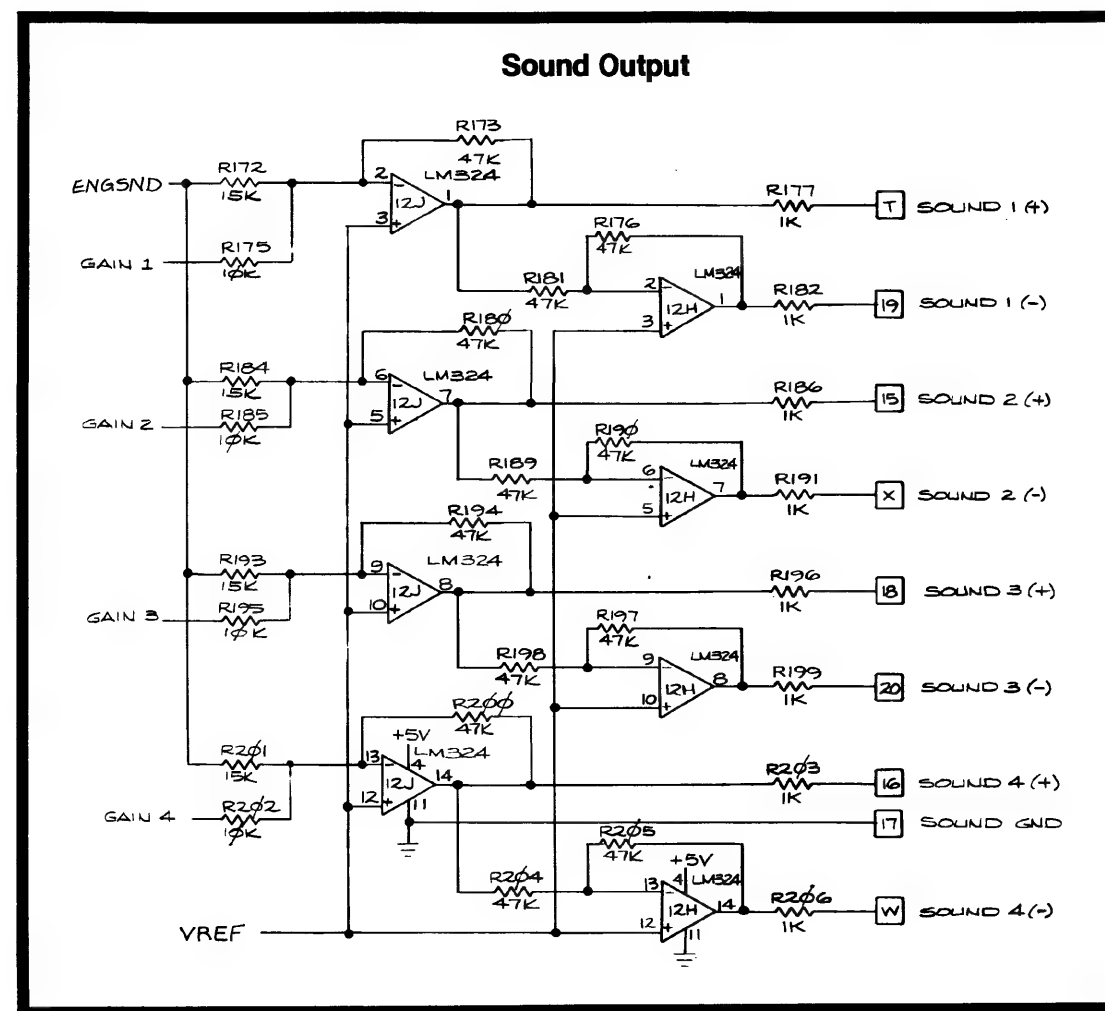
# Engine Sound Generator



## Pole Position CPU PCB Schematic Diagram

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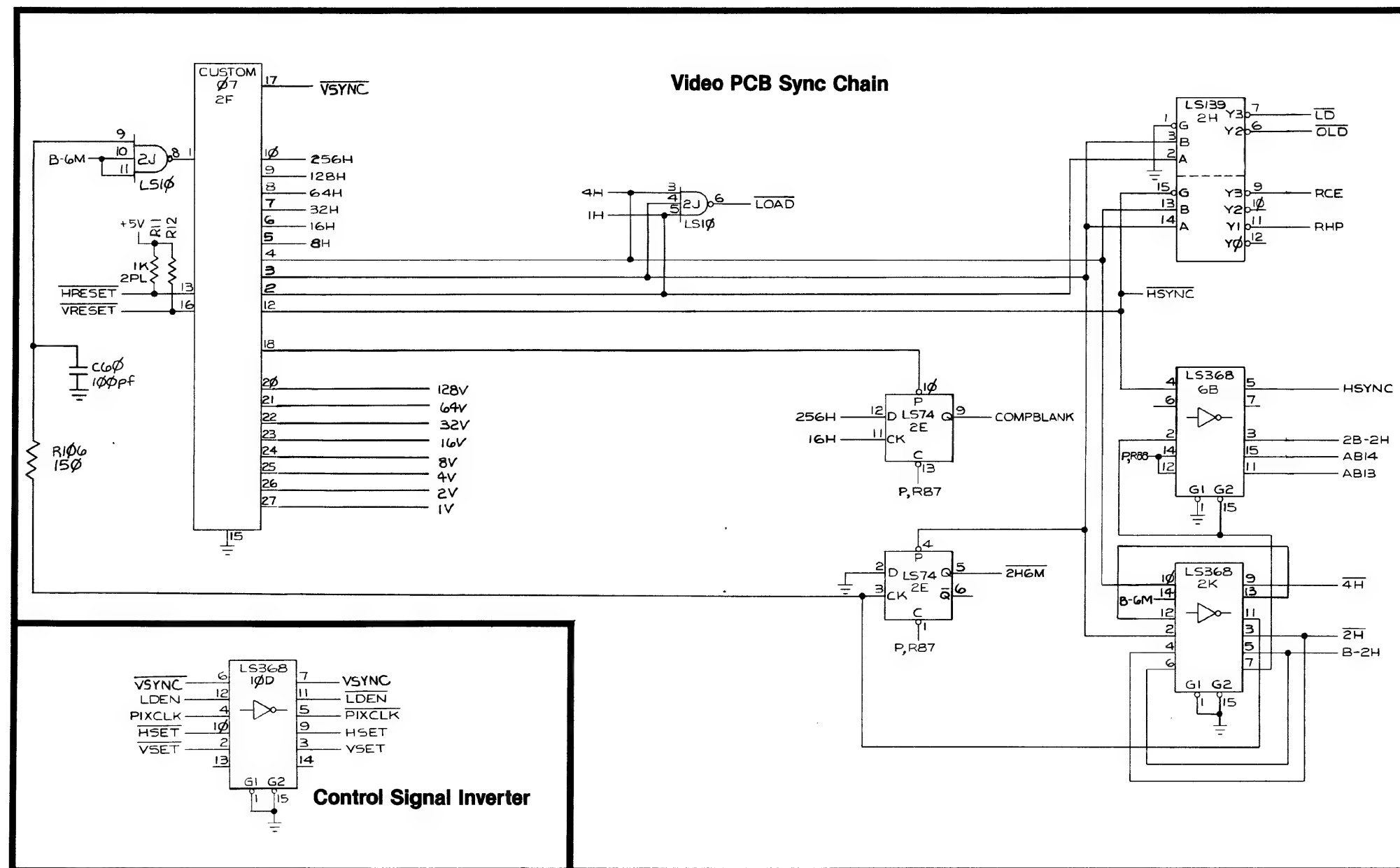


## Pole Position CPU PCB Schematic Diagram

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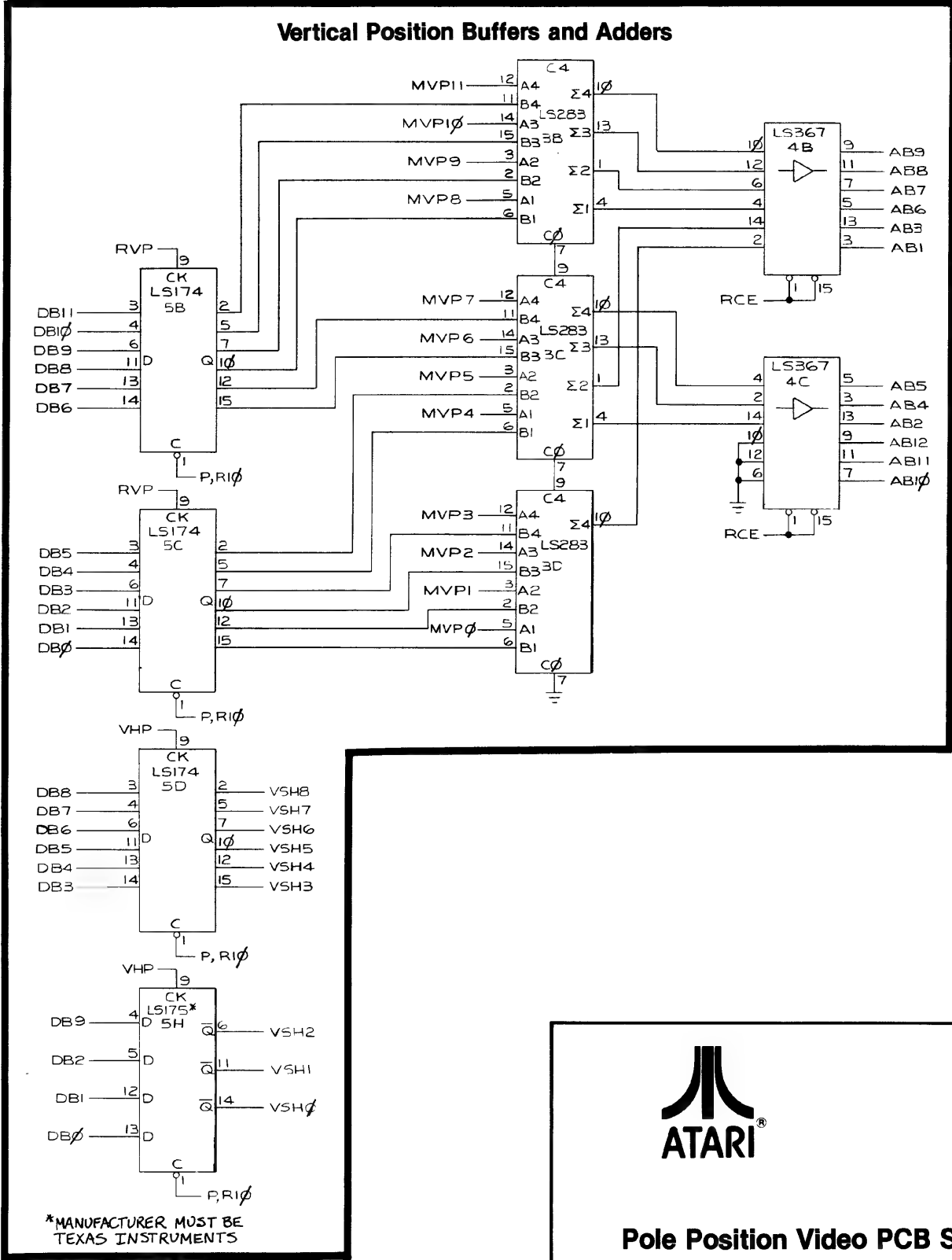
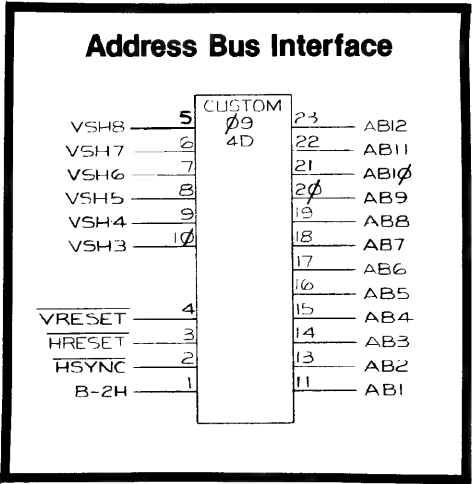
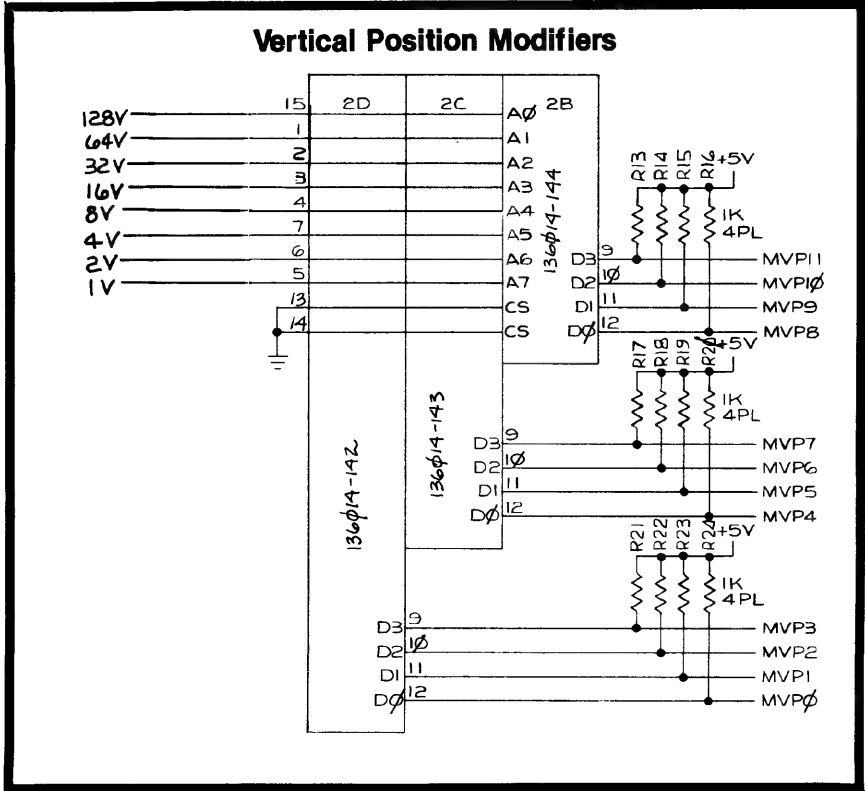





## Pole Position Video PCB Schematic Diagram

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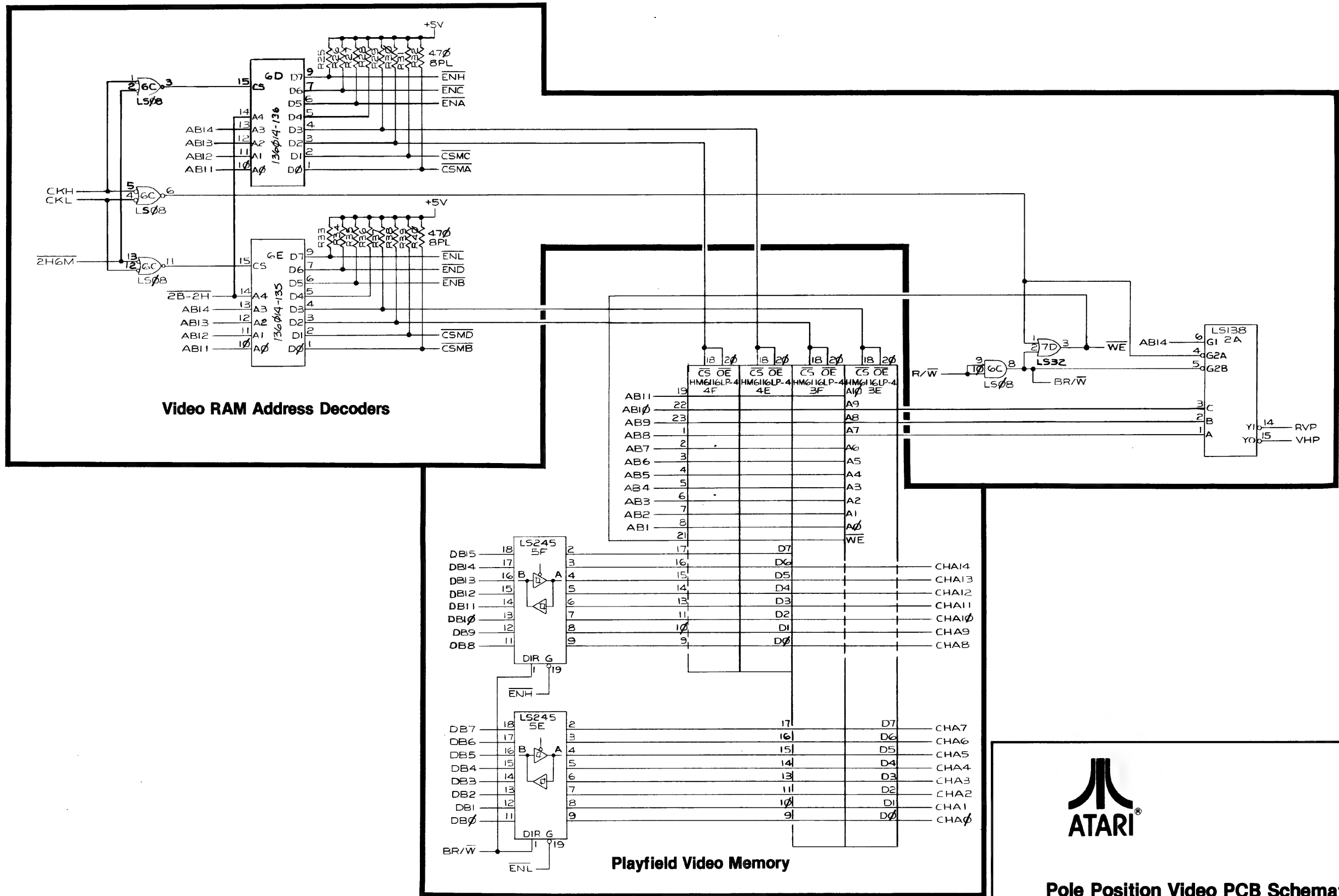




## Pole Position Video PCB Schematic Diagram

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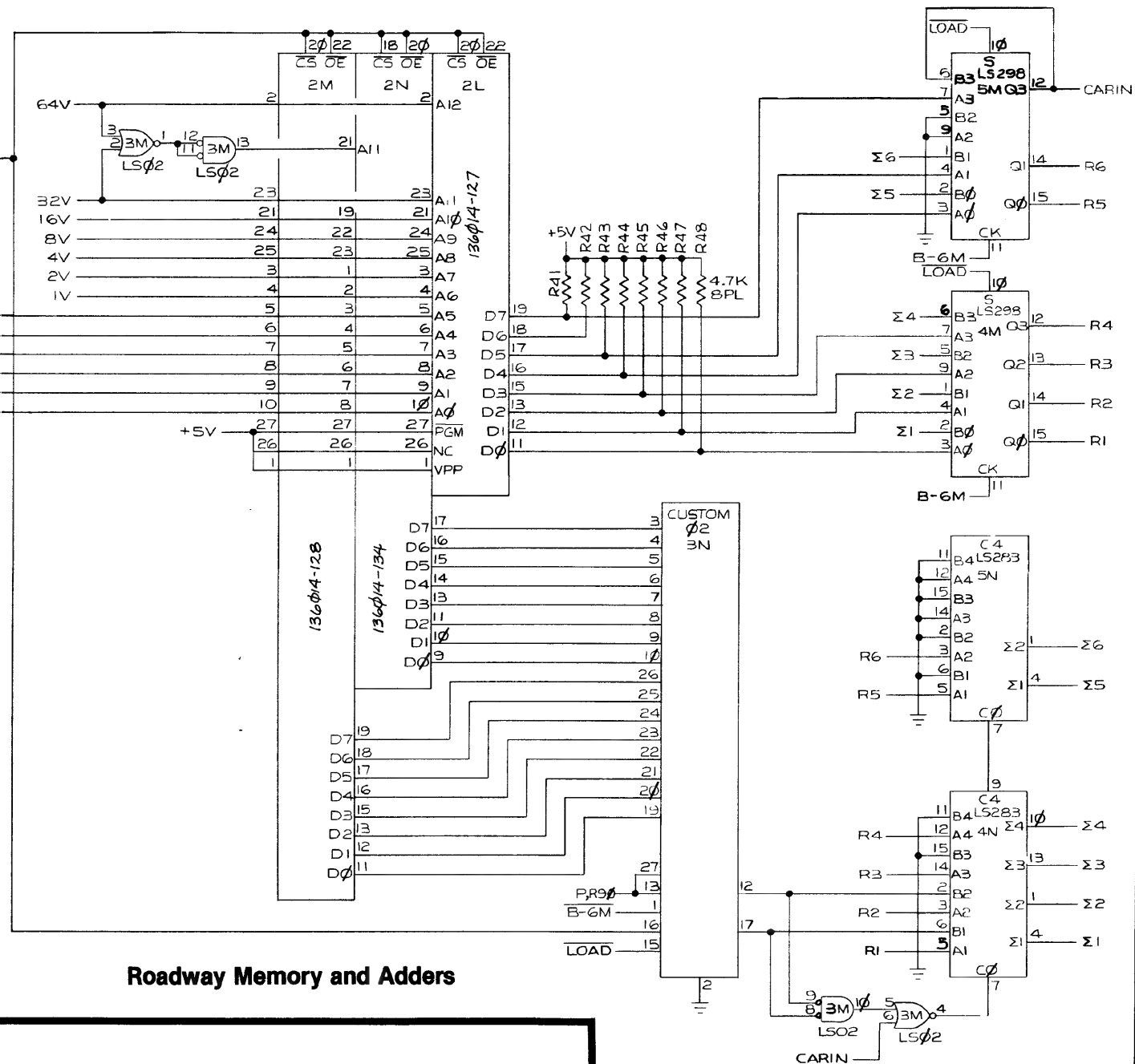
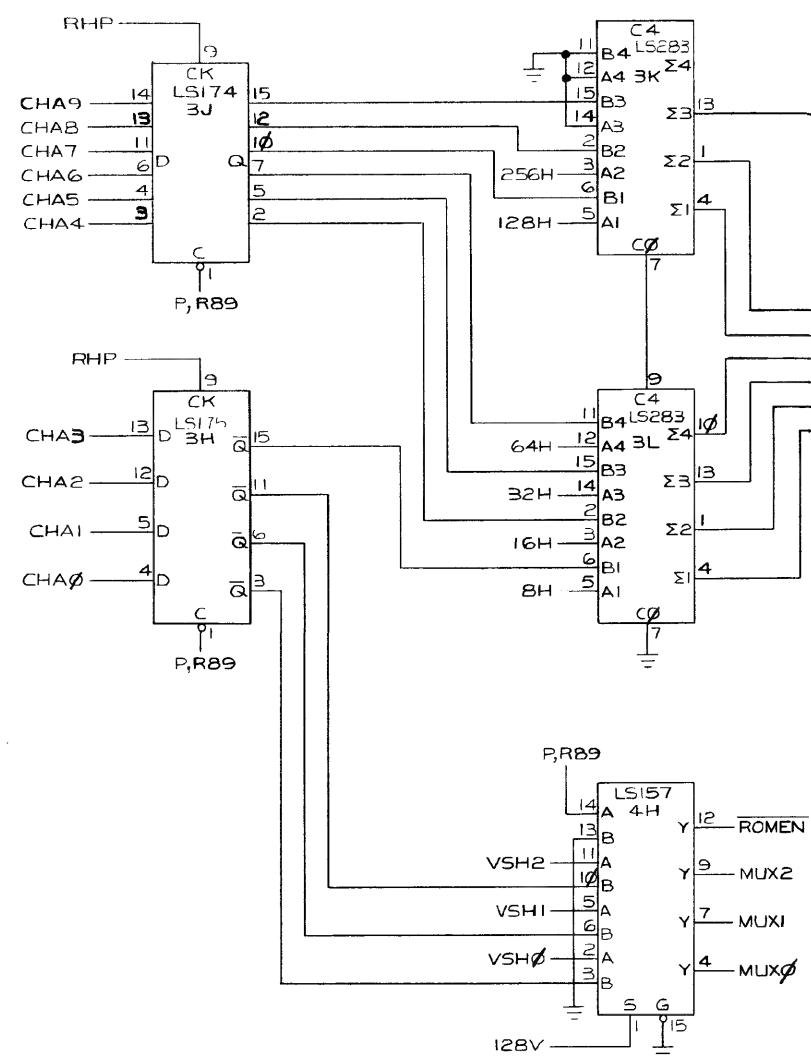


# Pole Position Video PCB Schematic Diagram

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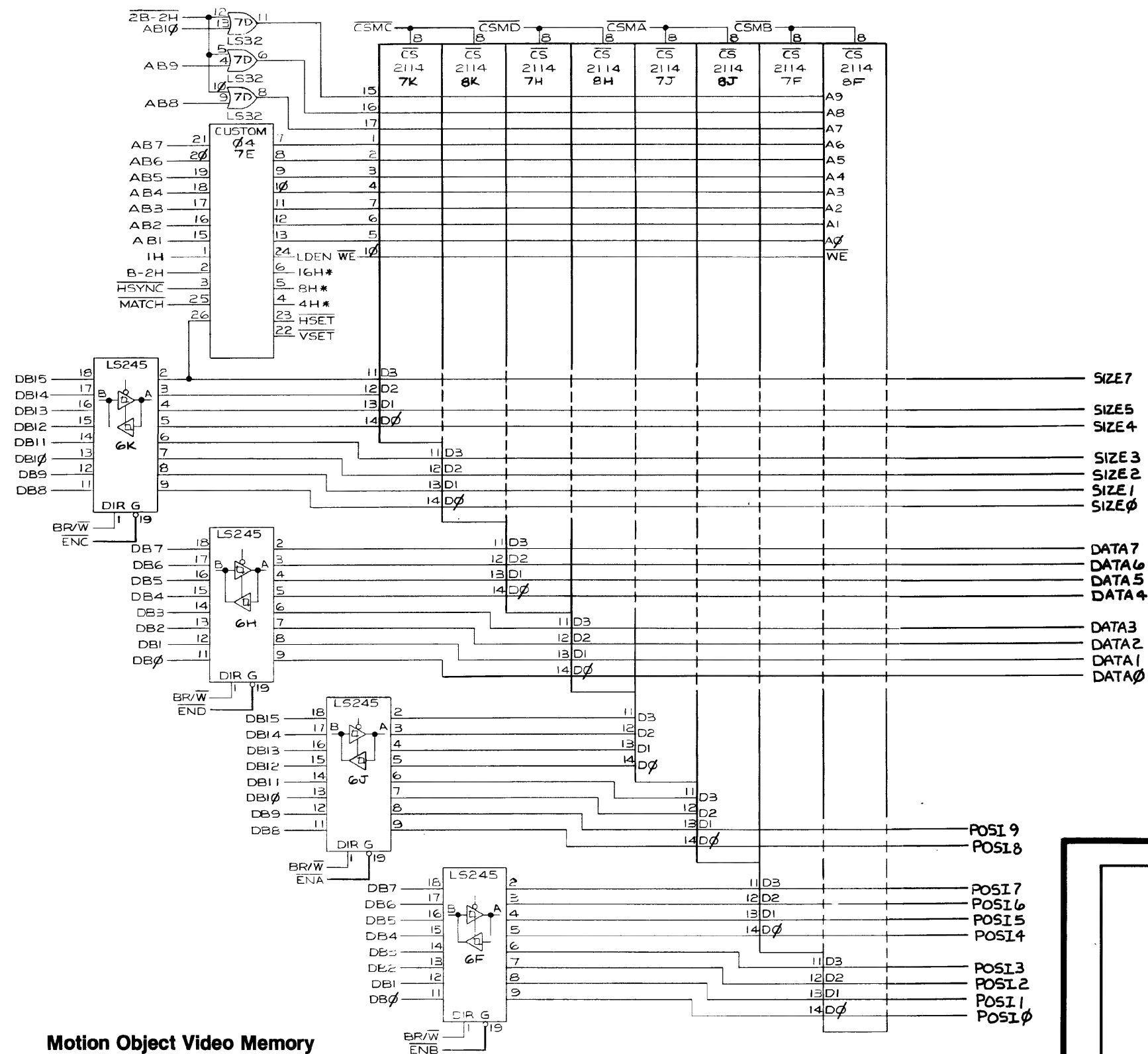
### Pole Position Video PCB Schematic Diagram

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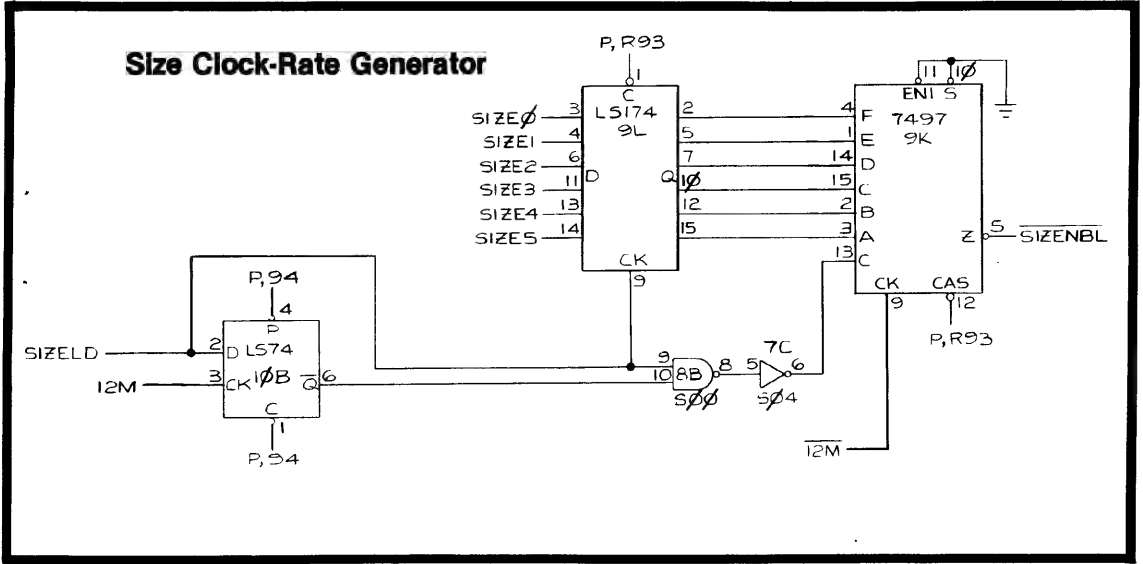
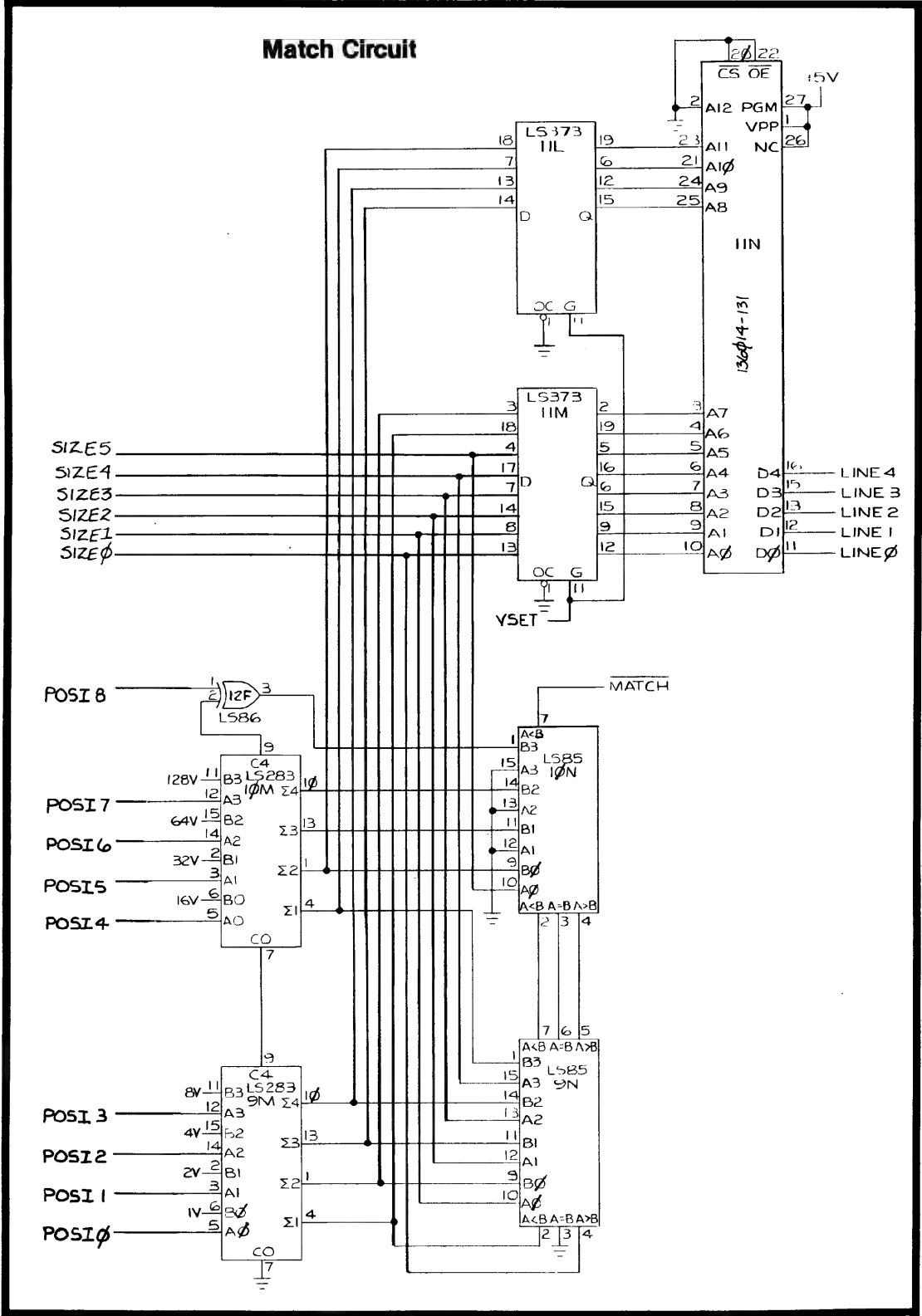
Motion Object Video Memory



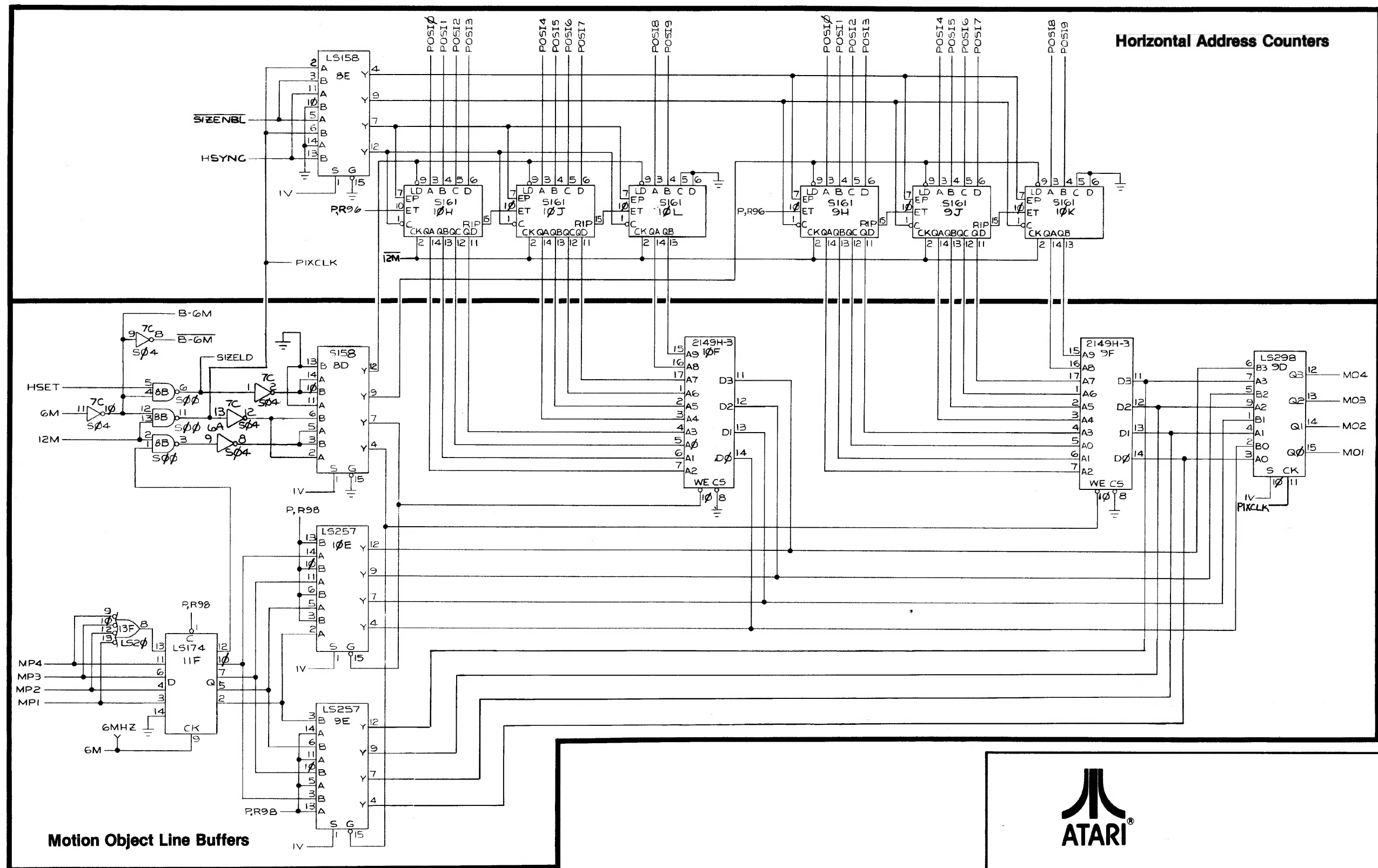
# Pole Position Video PCB Schematic Diagram

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# Pole Position Video PCB Schematic Diagram

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### Pole Position Video PCB Schematic Diagram

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# Schematic Notes

Unless otherwise specified

Resistance: ( $\Omega$ ) (K $\rightarrow$ K $\Omega$ , M $\rightarrow$ M $\Omega$ ), 1/4 (W) carbon resistor

Capacitance: 1 or higher  $\rightarrow$  (pF), less than 1  $\rightarrow$  ( $\mu$ F)

working voltage  $\rightarrow$  50 (V)

ceramic capacitor

Inductance: ( $\mu$ H)

Electrolytic Cap: Capacitance Value ( $\mu$ F)/working voltage (V),

NP  $\rightarrow$  non-polar (or bipolar) electrolytic cap.

Refer to the parts list for additional component information.

$\odot$  indicates test point connection

$\perp$  indicates chassis ground unless otherwise specified

Hz indicates cycles per second

For safety purposes (and continuing reliability)

$\triangle$  replace all components marked with safety symbol with identical type.

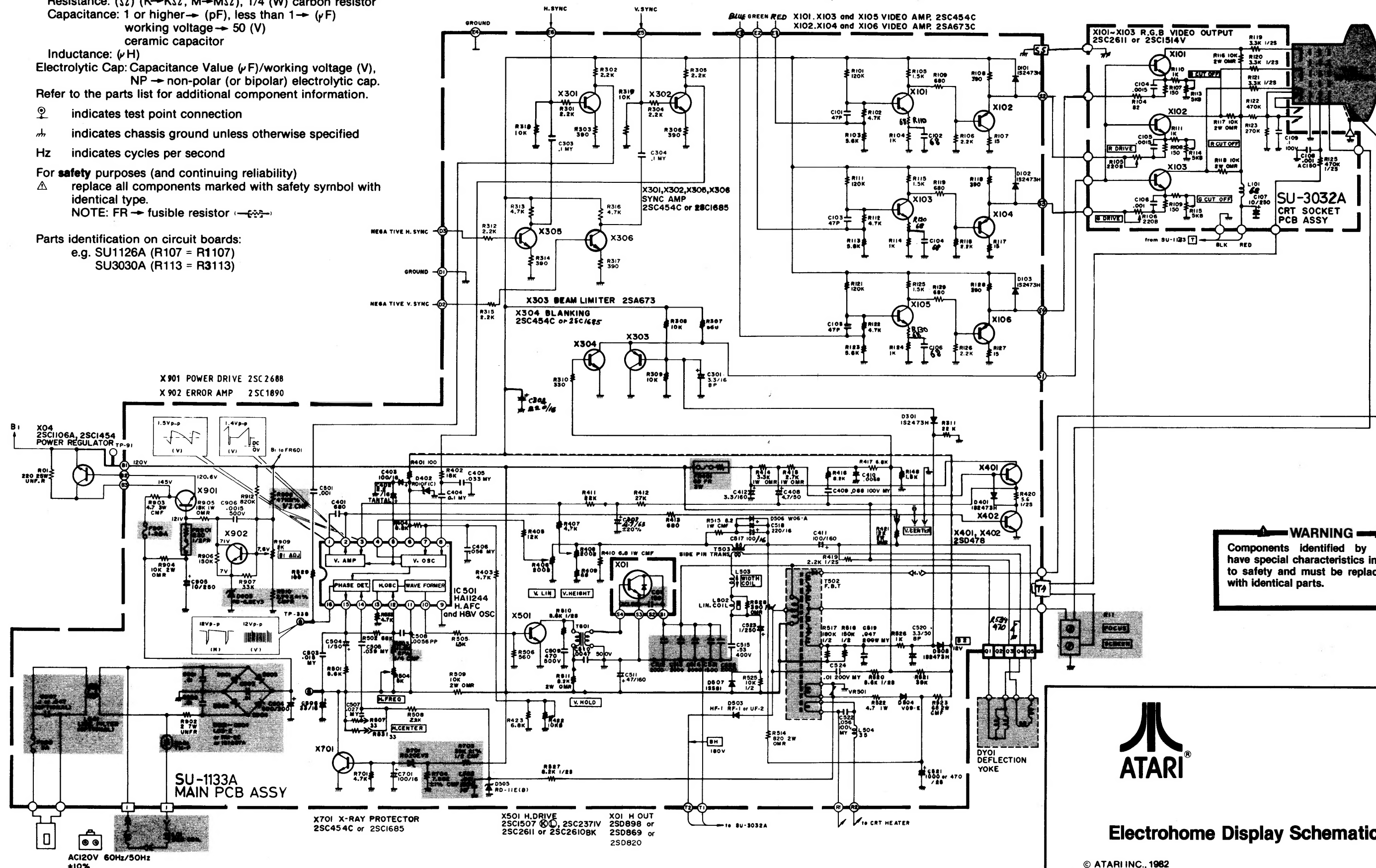
NOTE: FR  $\rightarrow$  fusible resistor ( $\rightarrow$ )

Parts identification on circuit boards:

e.g. SU1126A (R107 = R1107)

SU3030A (R113 = R3113)

## Electrohome 19-Inch Color Raster-Scan Video Display Schematic Diagram



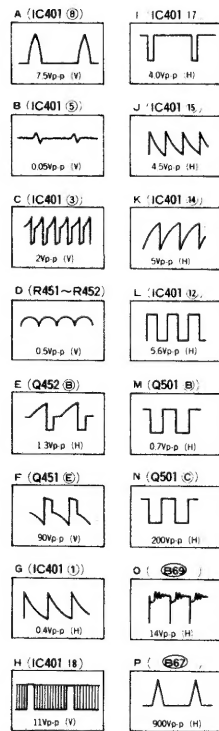
## Electrohome Display Schematic Diagram

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# Waveform



**NOTE**

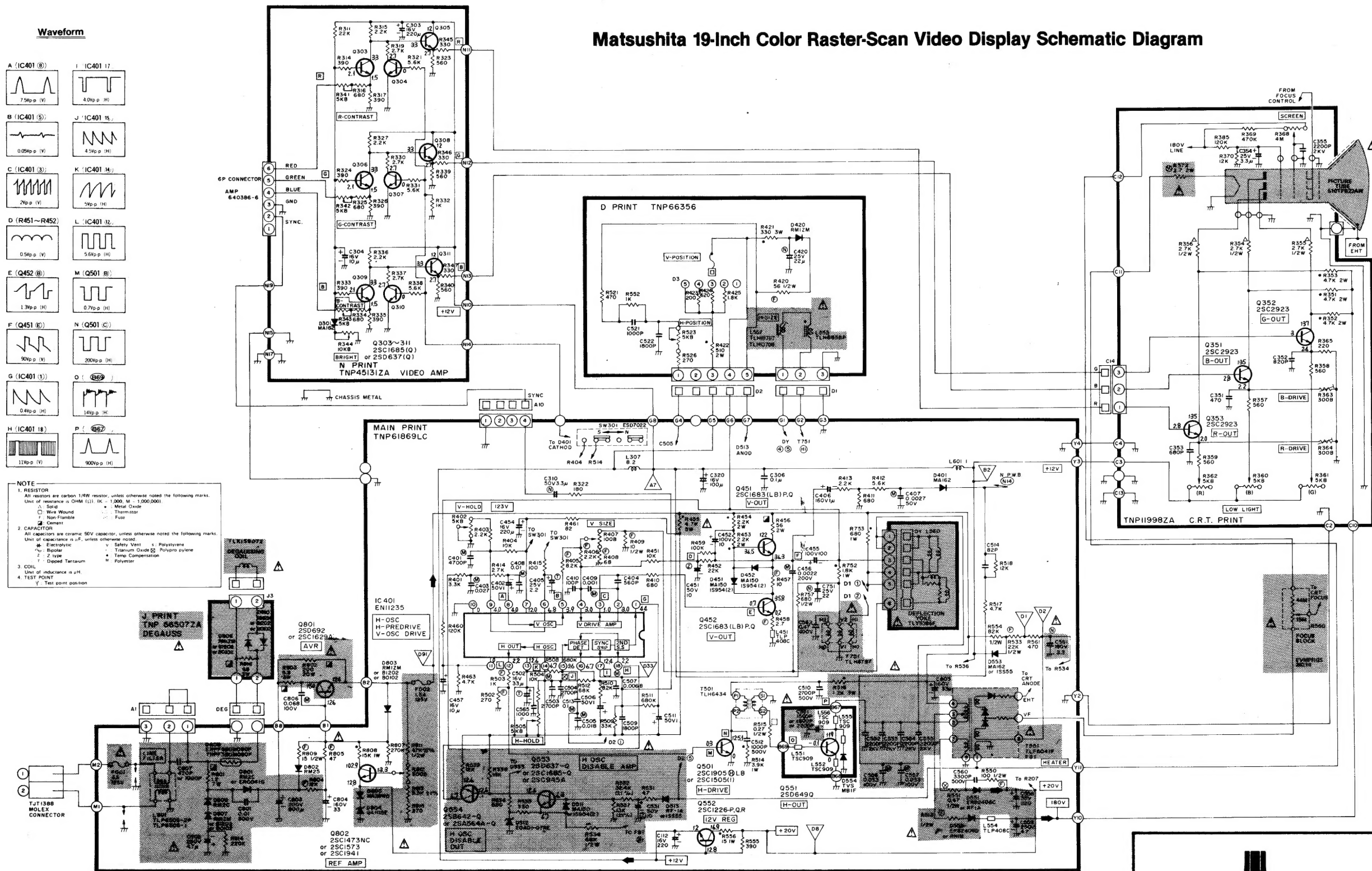
1. RESISTOR  
All resistors are carbon 1/8W resistor, unless otherwise noted the following marks:  
Unit of resistance is Ohm (Ω), K = 1,000, M = 1,000,000.  
△ Solid  
□ Wire Wound  
+ Non-Flammable  
- Cement  
- Safety Vent

2. CAPACITOR  
All capacitors are ceramic 50V capacitor, unless otherwise noted the following marks:  
Unit of capacitance is pF, unless otherwise noted.  
△ Electrolytic  
+ Polystyrene  
- Tripartite  
- Z-type  
- Doped Tantalum  
- Polyester

3. COIL  
Unit of inductance is μH.

4. TEST POINT  
V Test point position

## Matsushita 19-Inch Color Raster-Scan Video Display Schematic Diagram



**WARNING**

Components identified by shading have special characteristics important to safety and must be replaced only with identical parts.



## Matsushita Display Schematic Diagram

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